

2017-1776

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In The  
**United States Court Of Appeals  
For The Federal Circuit**  
**GRAPHIC PACKAGING INTERNATIONAL, INC.,**

*Appellant,*

v.

**INLINE PACKAGING, LLC,**

*Appellee.*

**ON APPEAL FROM THE PATENT AND TRADEMARK OFFICE -  
PATENT TRIAL AND APPEAL BOARD IN INTER PARTES REVIEW NO. IPR2015- 01609**

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**BRIEF OF APPELLANT**

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## **CERTIFICATE OF INTEREST**

Counsel for Appellant Graphic Packaging International, Inc., certifies the following:

1. The full name of every party or amicus represented by me is: Graphic Packaging International, Inc.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is: N/A.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are: Graphic Packaging Holding Company.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are: N/A.

Dated: June 19, 2017

/s/ Barry J. Herman  
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## **STATEMENT OF RELATED CASES**

This is an appeal by Graphic Packaging International, Inc. (“Graphic,” “Patent Owner,” or “Appellant”) from an inter partes review (“IPR”) of U.S. Patent No. 8,872,078 (“the ’078 patent”) before the United States Patent and Trademark Office, Patent Trial and Appeal Board (“the Board”) with Inline Packaging, LLC (“Inline,” “Petitioner,” or “Appellee”) as Petitioner and Graphic as Patent Owner. No prior appeal from this IPR was previously before this Court or any other court.

The ’078 patent has been asserted by Graphic against Inline in *Graphic Packaging International, Inc. v. Inline Packaging, LLC*, No. 0:15-cv-3476-JNE-LIB (D. Minn.). The claims and counterclaims in that case related to the ’078 patent are currently stayed pending the IPR that is the subject of this appeal. Also, after Graphic initiated the above civil action, Inline filed antitrust claims against Graphic in *Inline Packaging, LLC v. Graphic Packaging International, Inc.*, No. 15-cv-03183-ADM-LIB (D. Minn.). The issues in that still pending action are tangentially related to the ’078 patent.

## **JURISDICTION**

This is an appeal pursuant to 35 U.S.C. § 141(c) from the Final Written Decision of the Patent Trial and Appeal Board of the United States Patent and Trademark Office entered on January 10, 2017 in *Inter Partes* Review No. IPR2015-01609.

The present appeal is timely under 35 U.S.C. § 142, 37 C.F.R. § 90.3(a), and FED. CIR. R. 15 and 52, since Graphic filed a Notice of Appeal with the Director of the United States Patent & Trademark Office (“PTO”) and the Federal Circuit on March 8, 2017. This Court therefore has jurisdiction over this appeal under 35 U.S.C. § 141 and 28 U.S.C. § 1295(a)(4)(A).

## INTRODUCTION

This appeal involves an IPR that went awry. The ‘078 patent describes and claims a next-generation microwave package that allows browning and crisping of food products, acts as a carrying container after the food is prepared, and allows for easier consumption of the food by the consumer. The patented package met all of the performance goals of Nestlé, who entered a long term exclusive supply agreement with Graphic for the package, agreed to pay a higher price for the package, and ordered more sleeves than the previous design. Now, *via* IPR, Inline challenges the ‘078 patent hoping to legitimize its proven copying of Graphic’s invention and compete for Nestlé’s, as well as other Graphic customers’, business.

While the Board instituted the IPR based on the combination of a prior art patent, *Kato*, with other secondary references, the Board denied institution of the IPR on proposed ground 1 – that *Kato* and knowledge of a person of skill in the art (“POSA”) was enough to render the claims obvious. Yet in reaching its Final Decision, that is precisely what the Board relied upon, treating the secondary references (*Clough*, *Winkelman*, and *Young*) as mere afterthoughts. Thus, the Board’s decision rests almost entirely upon the declaration testimony of Inline’s technical expert, Dr. Sand, as to what modifications could be made to *Kato*. Sandbagging Graphic in this fashion – by relying largely on a rejected ground – is contrary to the Board’s own rules.

Perhaps most importantly, the Board relied extensively on Dr. Sand's conclusory and unsupported declaration testimony, but ignored critical admissions from her trial testimony (she was deposed twice). In contrast, the Petitioner declined to even take the deposition of Graphic's expert, Dr. Floros, leaving his opinions (that the claims are not obvious) largely un rebutted and unchallenged. The Board's decision, thus, does not rely on substantial evidence; instead, it ignores substantial evidence in the form of testimony from Dr. Floros and relies almost entirely on "evidence" from Dr. Sand that was discredited. In short, the Board failed to provide any articulated reason supported by substantial evidence as to why a POSA would have combined the elements to arrive at the claimed invention; in fact, the only "reason" articulated is provided by Graphic's patent claims, which is the definition of using impermissible hindsight.

Additionally – and critically – the objective indicia of nonobviousness of the '078 patent are overwhelming, including commercial success, failure of others, long-felt but unmet need, and copying. While the Board purported to address such secondary considerations, it did so in such a way that suggests its sole motive was to facially comply with this Court's recent directives to properly consider such evidence in hopes of avoiding reversal on appeal, instead of truly considering the facts on the record. The effect was a clear finding that secondary considerations

were present, but an unexplainable discounting of such considerations heavily or in total.

The Final Decision makes patently clear that the Board decided to invalidate all of the claims of the '078 patent and sought a rationale for doing so rather than conducting the proper *Graham* analysis prior to reaching its conclusion. To reach the outcome it desired, the Board impermissibly ignored expert testimony, impermissibly discounted secondary considerations, and impermissibly failed to show where the asserted prior art disclosed several key claim limitations. The Board's decision is therefore not supported by substantial evidence and rests on legal errors. It should be reversed.

## **STATEMENT OF THE ISSUES**

Whether the Board erred in ruling that the challenged claims are obvious by combining a primary reference, *Kato*, with various secondary “cooking” references:

- a. Without articulating any reason to combine, and without a rational underpinning to combine the specific secondary references;
- b. Where obviousness over *Kato* in view of the knowledge of a POSA was rejected as a ground for institution;
- c. Where it improperly disregarded or heavily discounted evidence of nonobviousness;
- d. Where it improperly placed the burden of proof on the patent owner; and
- e. Where it erred in utilizing supposed common sense or common knowledge to supply claim limitations not taught by the applied combinations of references.

Whether invalidation of a patent owner’s private rights in patent ownership without a jury trial is constitutional.



## **STATEMENT OF THE CASE**

This appeal is from an *inter partes* review of the '078 patent owned by Graphic. Graphic appeals the Board's ruling that claims 1-53 ("the challenged claims") of the '078 patent are unpatentable as obvious in view of the prior art.

**A. The '078 patent claims microwave heating constructs and blanks for forming such microwave heating constructs that uniquely solve a variety of problems in the area of convenience foods**

The '078 patent discloses various microwave heating constructs and blanks for forming such microwave heating constructs. Appx107 at 1:33-35. The constructs of the '078 patent uniquely solve a variety of problems in the area of convenience foods. *Id.* at 1:35-41, 2:12-14, 2:38-40. Specifically, at the time of the effective filing date of the '078 patent, there were needs for individual constructs that could serve as heating vessels for such foods in a microwave oven, enhance the browning and/or crisping of such foods in a microwave oven, and then serve as vessels for transporting and consuming the food after it was prepared. *Id.* at 1:25-29. The inventor of the packaging claimed in the '078 patent conceived an all-in-one construct that serves all of these desired functions with a low cost, consumer-friendly design made to properly cook the specific foods contained in that packaging.

Generally described, a blank (FIG. 6A) comprising a plurality of panels can be folded into a sleeve (FIG. 6B), which is configured to receive a food item within its interior space.

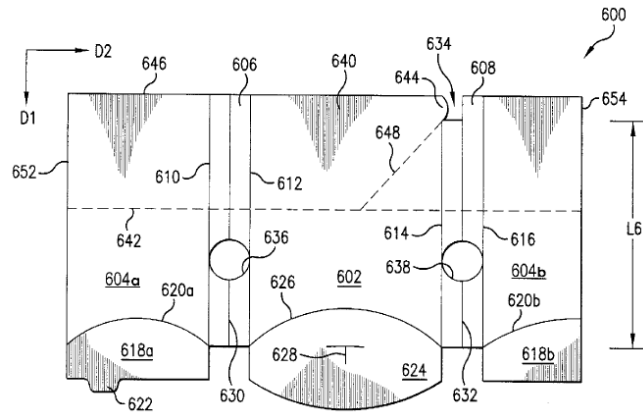


FIG. 6A

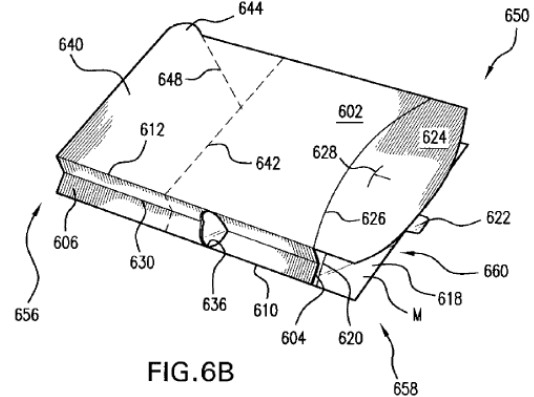


FIG. 6B

Appx102 at FIG. 6A; Appx103 at FIG. 6B; Appx115 at 18:59-61; Appx116 at 19:54-58.

The sleeve includes microwave energy interactive material for heating and browning and/or crisping the food item when the sleeve with the food item is subjected to microwave energy. Appx107 at 1:48-52. When heating is complete, the end panels of the sleeve can be folded inwardly to close one end of the construct, which then serves as a base of the construct for supporting the browned and crisped food item in an upright condition (FIG. 6C). Appx116 at 20:5-13.

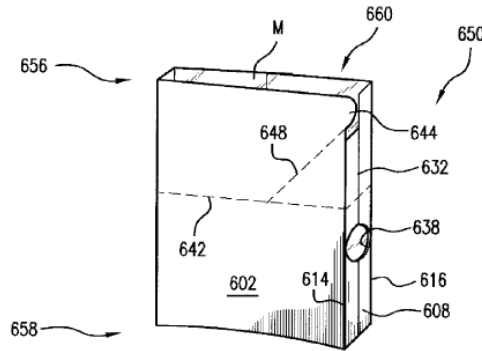


FIG. 6C

Appx103 at FIG. 6C.

The '078 patent includes 53 claims, of which claims 1, 12, 20, 29, 34, 39, 42, and 47 are independent. Independent claims 1, 12, 20, and 29 are directed to a microwave heating construct. *See, e.g.*, Appx117 at 22:14-47. Independent claims 34, 39, 42, and 47 are directed to a blank for forming a microwave heating construct. *See, e.g.*, Appx119 at 26:28 – 27:4. Various dependent claims are directed to, *inter alia*, apertures, specific tab and slit features, removable portions, specific microwave energy interactive material, and a method for using the construct/blank. *See, e.g.*, Appx117 at 22:53-65; Appx120 at 27:9-11, 27:18-19.

**B. None of the asserted prior art solves the unique problem identified and solved by the '078 patent**

The combinations found by the Board to render the '078 patent obvious are each based on a primary reference, *Kato*, which discloses a container for pre-prepared, ready-to-eat food intended only to act as a barrier between the user and the food in order to keep the user's hands from contact with the food. The Board found that *Kato* does not supply a motivation to reconfigure the package into a

browning and crisping construct with the novel combination of features claimed in the '078 patent. *See* Appx26-27. The Board found it was appropriate to do so based on the motivation allegedly supplied by secondary references. *Id.* However, for the reasons set forth below, this is contrary to the law as the changes to *Kato* necessary to accomplish this would inhibit the modified construct from performing *Kato*'s stated purpose.

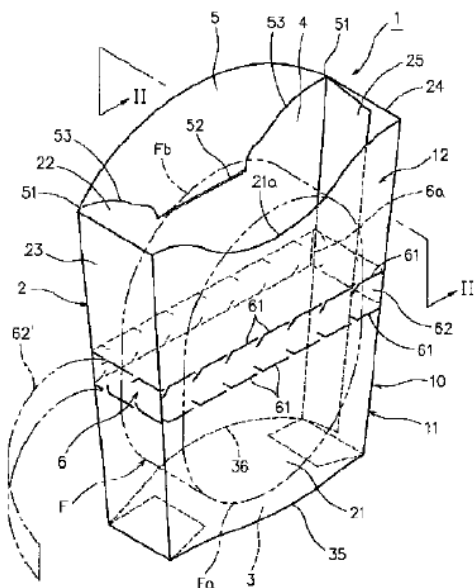
### 1. *Kato*

*Kato* (Appx1670-1675) discloses a container for a "ready-to-eat" food item, such as a fast food item that has already been prepared (e.g., heated or fried) and a blank for forming the container. Appx1671 ¶ [0001]. According to *Kato*, the purpose of the container is to prevent the "ready-to-eat" food from dirtying the hands of the consumer, while the food remains in a sanitary or hygienic condition:

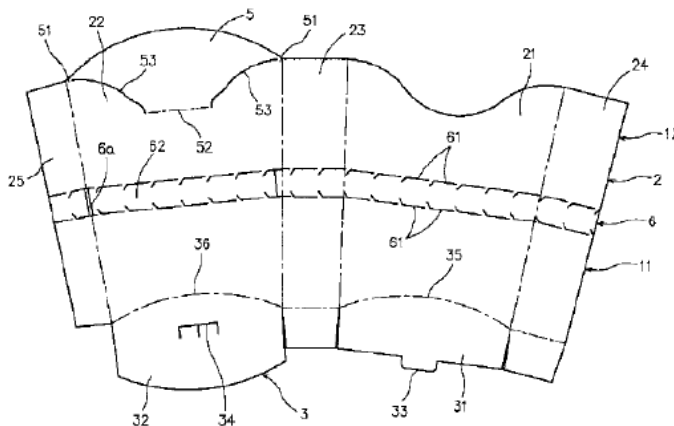
[Problems to be Solved by the Invention] From the sanitary aspect, it is undesirable to take out bulky foods like hamburgers or hot dogs from packaging materials and eat them with one's hands. In addition, when eating bulky foods with one's hand, the sauce that is added to bulky foods sometimes sticks onto one's hands, making them dirty. In addition, even eating bulky foods like croquettes and fried pork chops with one's hands will appear unhealthy, and oil and other substances from the bulky foods will make hands dirty.

*Id.* ¶ [0004] (emphasis added). One container and corresponding blank of *Kato* are shown in FIGs. 1 & 3.

[Fig. 1]



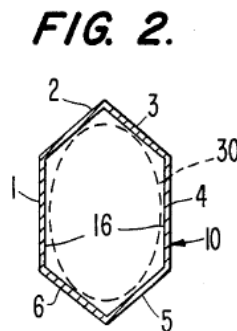
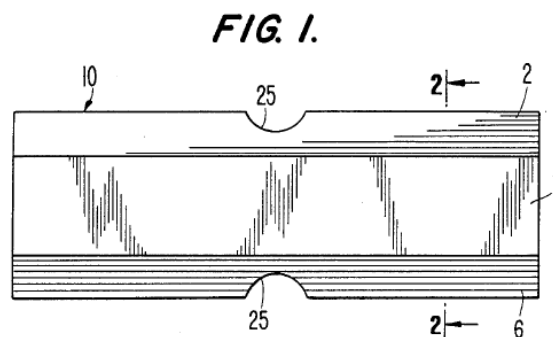
[Fig. 3]



Appx1673-1674 at FIGs. 1 and 3. Notably, *Kato* makes absolutely no mention of using its container as a heating package, much less a microwave heating package or a microwave browning and crisping package. The Board agreed, finding that any motivation to combine *Kato*'s construct with elements designed to brown and crisp contained foods was supplied by the secondary references. Appx26-27.

## 2. *Clough*

*Clough* (Appx1329-1334) discloses a six-sided microwave reactive package for cooking a food item that purports to improve internal (i.e., dielectric) heating of the interior of the item, while browning and/or crisping its exterior. Appx1331 at 2:43-53. To do so, the package of *Clough* is configured as a six-sided sleeve with open ends and apertures that allow microwaves “to enter the container and penetrate the food product,” as shown in FIGs. 1 & 2.



Appx1332 at 3:5-10, 3:52-54; Appx1330 at FIGs. 1 & 2. With regard to the combination of *Kato* and *Clough*, the Board found that *Clough* and only *Clough* provides the motivation needed for a POSA to combine it with *Kato* in order to reach each of the claim limitations. Appx26-27. The Board did not make any finding that *Clough* suggests a need to facilitate transportation and consumption of a food item therein. Appx26-33; *see also* Appx1710 ¶ 44.

### 3. *Young*

*Young* (Appx1291-1313) teaches a microwave susceptor material that “provides improved cooking properties to a food product by absorbing excess liquid, such as moisture, grease and oil, that is liberated from the food product.” Appx1306 ¶ [0027]. The susceptor material includes a plurality of layers. *Id.* ¶ [0028-34]. *Young* discloses a number of possible structures including, for example, the structure of FIG. 10J (relied upon by Petitioner). The Board did not make any finding that *Young* suggests a need to facilitate transportation and consumption of a food item therein. Appx64-67; *see also* Appx1713 ¶ 48.

#### **4. *Winkelman***

*Winkelman* (Appx1314-1328) discloses a blank for forming a container that includes a susceptor material, as shown in FIG. 6. Appx1326 ¶ [0046]; Appx1320 at FIG. 6. The preferred shape of the “envelope” is triangular, and “[o]ther types of food products, such as round products, would be suitable for a U-shaped envelope.” Appx1323-1324 ¶ [0012]. *Winkelman* also discloses other shapes for the container, such as oval, rectangular, cylindrical, or square, without any further description or any drawings showing how such configurations would be accomplished. Appx1326 ¶ [0051]; Appx1714 ¶ 51. The Board found that *Winkelman* satisfied both needs identified and solved in the ‘078 patent: (1) serve as heating vessels to enhance the browning and/or crisping of such foods in a microwave oven, and (2) then serve as vessels for transporting and consuming the food after it was prepared. Appx30-31. This finding is not supported by rational underpinnings, as *Winkelman* expressly states, “[d]uring consumption of the food, the food item, or portions thereof, can be removed from the container.” Appx1324 ¶ [0014].

#### **5. *Brown***

*Brown* (Appx1335-1349) discloses a container for cooking “food requiring browning and crisping on only one side.” Appx1344 at 3:39-47. The assembly includes an outer carton 4 (Appx1337 at FIG. 2), an insert 6 (Appx1338 at FIG. 4), and a tray 76 for holding the food item (Appx1339 at FIG. 5). The insert includes

a microwave reflective shielding means with an optional aperture for bulk heating (Appx1345 at 6:46-61), while the outer carton includes a microwave interactive layer on the top panel for browning the upper surface of the food (Appx1344 at 3:47-52).

*Brown* is relied upon only with regard to certain dependent claims reciting a tab and slit closure.

### **C. *Inter Partes* Review**

#### **1. The Petition**

On August 5, 2015, Inline filed a corrected petition (Appx127-192) requesting IPR of claims 1-53 of the '078 patent, alleging that the challenged claims were invalid as obvious over various combinations of the above references listed below. *See* Appx139.

<b>Ground</b>	<b>Claims</b>	<b>Prior Art</b>
1	1-53	<i>Kato</i>
2	1-4, 6-24, 26-29, 31-33	<i>Kato</i> and <i>Clough</i>
3	5, 25, 30	<i>Kato</i> , <i>Clough</i> , and <i>Brown</i>
4	34, 35, 37-42, 44-49, 51-53	<i>Kato</i> and <i>Young</i>
5	36, 43, 50	<i>Kato</i> , <i>Young</i> , and <i>Brown</i>
6	34, 35, 37-42, 44-49, 51-53	<i>Kato</i> and <i>Winkelman</i>
7	1, 12, 20, 29, 34, 42, 47	<i>Sigel</i> and <i>Kato</i>



The Petition contained no claim charts, and Petitioner did not map out where the prior art supposedly disclosed each limitation. *See* Appx217-223. The Petition was accompanied by an expert declaration from Dr. Claire Sand, which also failed to provide claim charts mapping the prior art. Instead, Dr. Sand provided analysis based entirely on sweeping generalizations, conclusory statements, and the impermissible use of hindsight, using the ‘078 patent claims as a roadmap for reconstructing the claimed microwave heating constructs and blanks. In fact, Dr. Sand apparently – and incorrectly – believes that it would be obvious to combine any carton meant to hold hot food with microwaveable energy interactive materials to allow the food to be heated in that carton.

## **2. The Institution Decision**

In spite of a preliminary response to the corrected petition (Appx193-258), which demonstrated that Inline failed to meet its obligation to specifically point out where each limitation is taught by the asserted art, the asserted art fails to disclose all elements of the ‘078 patent claims, and there is no motivation to combine the multiple references asserted, on January 12, 2016, the Board instituted IPR of all challenged claims on Grounds 2-7 listed above. Appx290-291. Critically, the Board denied institution with regard to Ground 1, Inline’s assertion that claims 1-53 of the ‘078 patent are unpatentable over *Kato* alone in view of the knowledge of one of ordinary skill in the art. Appx289-290.

### 3. The Evidentiary Record

As noted above, Inline's Petition was accompanied by a declaration from its expert, Dr. Sand. Appx1151-1269. After the IPR was instituted, Graphic deposed Dr. Sand and obtained critical admissions related to *Kato*'s use as a cooking construct (Appx1914 at 114:18-21; *see also* Appx1895 at 39:9-21; Appx1914-1916 at 114:2 – 123:23; Appx1923-1924 at 152:18 – 154:6); the lack of similarity between *Kato* and the various references she claimed it should be combined with because of the similarity (Appx1929-1930 at 176:14 – 179:5 (responding to *Clough* as a six, not four, sided figure by referencing *Young*)); and the failure of the references to teach certain limitations claimed in the '078 patent (Appx1917-1919 at 129:8 – 136:22 (as to *Kato*'s unequal side edges of the end panels); Appx1928 at 172:23 – 173:22 (as to *Young*'s lack of end closure); Appx1930 at 179:23 – 181:10 (as to *Clough*'s lack of end closure); Appx1936 at 202:15 – 204:1 (as to *Winkelman*'s lack of a free edge extending in the second direction); and Appx1933 at 192:17 – 193:14 (as to *Winkelman*'s unequal side edges of the end panels)). Graphic subsequently submitted a Patent Owner Response (Appx293-357), accompanied by a declaration from its expert, Dr. Floros (Appx1682-1761), and a declaration from a fact witness, Jeff Voyzey (Appx1762-1777), who is the Director of Business Development for Graphic. Appx1763 ¶ 1. The Response set forth in detail why the claims were not obvious because Petitioner (1) failed to

show that the asserted art discloses all elements of the claims, and (2) did not demonstrate that a POSA would have any motivation to combine *Kato*'s carrying construct with features needed for cooking, where such features would frustrate *Kato*'s purpose. Appx328-356. The Response further included comprehensive evidence of secondary considerations of non-obviousness, supported by fact testimony from Mr. Voyzey and expert testimony from Dr. Floros. Appx318-328.

The evidence related to secondary considerations included commercial success, failure of others, long-felt but unsolved need, and copying. For example, Nestlé and an outside consultant, Mr. Robert Schiffman, had tried and failed for many years to develop a solution for Nestlé's protracted need for a sleeve that could hold a Hot Pockets® sandwich, brown and crisp it using microwave energy, while also being portable and easily opened for consumption. Appx1767-1775 ¶¶ 13-15, 18, 20-23, 25-31; Appx1812-1824. Nestlé then turned to Graphic for a solution. Even though Nestlé specifically expressed a desire to cut costs for its new Hot Pockets® and Lean Pockets® packaging, the '078 patent's sleeve solution met Nestlé's identified challenges so well that Nestlé was willing to pay Graphic an increased price to manufacture the sleeves. Appx1771-1775 ¶¶ 23-31.

Desiring to keep the '078 patent's advantages from competitors, Nestlé entered into an abnormally long seven-year exclusivity agreement with Graphic for the provision of the sleeves. Appx1775-1776 ¶¶ 31-33. Following the

introduction of the new ‘078 sleeve, Graphic’s sales of Hot Pockets® and Lean Pockets® sleeves to Nestlé soared, capturing 100% of its market share due to the inventive features of the packaging, and consumer research indicated that the ‘078’s benefits would drive them to eat “Hot Pockets more often.” Appx1772-1776 ¶¶ 26-32; Appx1882; Appx1723 ¶ 72; Appx1870-1880 at Appx1874. Then, with the exclusivity period with Graphic coming to an end, Nestlé sought to identify a secondary supplier for the sleeves. Nestlé approached Inline, provided Inline with Graphic’s specification for the ‘078 patent’s sleeve, and asked Inline to manufacture the same – even contemplating using Graphic as a backup should Inline be unable to fulfill its obligations. *See* Appx2028; Appx2029-2036; Appx2041; Appx2049; Appx2027. Inline thereafter made a direct knockoff of Graphic’s patented sleeve. Appx1722 ¶¶ 69-70.

Most of the factual basis for these secondary considerations was set forth in the declaration of Mr. Voyzey, a Graphic sales executive who was intimately familiar with these details. In addition, Dr. Floros provided expert testimony related to some of the secondary considerations, primarily related to nexus and copying by Inline. Appx1722-1723 ¶¶ 69-72. Petitioner took Mr. Voyzey’s deposition. After scheduling the deposition of Dr. Floros, however, Petitioner’s counsel decided on the morning of the scheduled deposition that it would not take his deposition. Appx393 ¶ 7.

Inline submitted its Reply on June 30, 2016, with another declaration from Dr. Sand. Appx358-389; Appx1463-1504. Inline submitted almost no evidence to rebut the secondary considerations described in detail in Graphic's Response; instead, it made a legal argument that Graphic had failed to show a nexus between the claims and the objective criteria. Appx379-386.

Graphic took the deposition of Dr. Sand based on her second declaration and submitted a motion for observations regarding this testimony. Appx390-406.

#### **4. The Final Written Decision**

On January 10, 2017, the Board rendered a Decision in IPR2015-01609 ("Final Written Decision") finding that claims 1-53 are unpatentable as obvious over the various combinations with *Kato* as the primary reference asserted in Grounds 2-6 above. For each of these grounds, the Board relied on the *Kato* reference for most elements. The Board further found that a POSA would have been motivated to modify *Kato* – specifically described as a construct designed to receive "ready-to-eat" food and prevent it from dirtying the hands of the consumer – in view of various cooking constructs shown in *Clough*, *Winkelman*, and *Young*.

With regards to secondary considerations, the Board found Graphic established that its objective evidence of nonobviousness was tied to the '078 patent's sleeve, giving rise to a nexus between the claimed invention and secondary considerations. Appx39-40. Over Inline's plea of innocence, the Board

found that Inline “undeniably copied [Graphic’s] improved sleeve design” covered by the ‘078 patent. Appx54.

Despite stating that it found a nexus, the Board ignored the attendant presumption, discounting Graphic’s unrebutted proof of nonobviousness with no basis other than conjecture and speculation. The Board repeatedly brushed aside Graphic’s chief witness on secondary considerations – someone intimately involved in the development and commercialization of the improved patented sleeve – for no other reason than he is Graphic’s employee. *See* Appx42.

## **SUMMARY OF ARGUMENT**

The Board's decision in this case is fundamentally flawed. Because the Board erred with respect to several essential issues, the Board's ruling cannot stand.

*First*, the Board erred in concluding there is any motivation to combine *Kato*, which is directed to holding "ready-to-eat" food items during consumption, with the various secondary references directed to cooking constructs. Each rationale offered by Petitioner with regard to the specific secondary references falls apart under even modest scrutiny, which the Board ignored. The record is un rebutted that numerous other changes are necessary for *Kato* to perform as a functional cooking construct – changes that would frustrate *Kato*'s ability to perform its stated function.

Instead, the Board resorted to improperly placing the burden on Graphic to demonstrate that a POSA would not know to add microwave energy interactive material to *Kato*. However, obviousness over *Kato* alone in view of the knowledge of a POSA was expressly rejected by the Board as a ground for institution. Moreover, the Board referenced non-existent "claim charts" provided by Petitioner in finding that microwave energy interactive material is the only limitation of the '078 patent not anticipated by *Kato* and ignored the limitations of the dependent claims entirely.

*Second*, in a nod to recent criticism from this Court, the Board acknowledged that secondary considerations of nonobviousness are present, but – patently ignoring the Court’s guidance – refused to give those secondary considerations any weight.

*Finally*, the Board improperly substituted what it alleged to be common knowledge for missing limitations not present in either asserted reference. Once again, *Kato* alone in view of the knowledge of a person skilled in the art was rejected as a ground for review. Even if it had not, the Board’s failure to explain the common knowledge or common sense it relied upon is problematic and improper.

These errors are fatal to the Board’s obviousness determination, and there is not substantial evidence to support a finding of obviousness for any of the 53 asserted claims. The Board’s decision should be reversed, and the claims of the ’078 patent should be found not invalid.

*Further*, invalidation of a patent owner’s private property right in patent ownership through *inter partes* review violates the patent owner’s Seventh Amendment right to a jury trial. The Board’s decision should be vacated or, in the alternative, this Court’s decision should be held pending the Supreme Court’s decision in *Oil States Energy Servs., LLC v. Greene’s Energy Group, LLC*.



## **ARGUMENT**

### **I. Standard of Review**

As a general matter, this Court “review[s] the Board’s conclusions of law *de novo* and its findings of fact for substantial evidence.” *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1297 (Fed. Cir. 2015) (citing *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000)). “The substantial evidence standard requires the reviewing court to ask whether a reasonable person might find that the evidentiary record supports the agency’s conclusion.” *On-Line Careline, Inc. v. Am. Online, Inc.*, 229 F.3d 1080, 1085 (Fed. Cir. 2000). The petitioner in an IPR bears the burden of proving unpatentability. 35 U.S.C. § 316(e).

Obviousness is a question of law based on underlying findings of fact, which include a determination of the scope and content of the prior art. *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381 (Fed. Cir. 2015) (citing *Flo Healthcare Sol’ns, LLC v. Kappos*, 697 F.3d 1367, 1375 (Fed. Cir. 2012)). A patent is obvious “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a POSA to which said subject matter pertains.” 35 U.S.C. § 103(a).<sup>1</sup> In reaching this conclusion, the court must avoid “hindsight bias and must be cautious of arguments reliant upon ex post

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<sup>1</sup> The ‘078 patent claims priority to U.S. Provisional App. No. 60/748,638, filed on December 8, 2005 and is therefore governed by pre-AIA 35 U.S.C. § 103.

reasoning.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007). Substantial evidence is “such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1259 (Fed. Cir. 2010) (quoting *Consol. Edison Co. v. Nat’l Labor Relations Bd.*, 305 U.S. 197, 229 (1938)). In deciding whether an agency decision is supported by substantial evidence, this Court “review[s] the record as a whole – including any evidence that fairly detracts from the substantiality of the evidence.” *Pam, S.P.A. v. U.S.*, 582 F.3d 1336, 1339 (Fed. Cir. 2009) (quotation omitted); *see also Ningbo Dafa Chem. Fiber Co., Ltd. v. U.S.*, 580 F.3d 1247, 1253 (Fed. Cir. 2009) (substantial evidence review “must take into account ... contradictory evidence”) (citation omitted).

“[G]eneral and conclusory testimony . . . does not suffice as substantial evidence of invalidity.” *Whitserve, LLC v. Comput. Packages, Inc.*, 694 F.3d 10, 24 (Fed. Cir. 2012) (quoting *Koito Mfg. Co. v. Turn-Key-Tech, LLC*, 381 F.3d 1142, 1152 (Fed. Cir. 2004) (modification in original)).

**A. The Board Erred in Concluding It Would Have Been Obvious To Modify *Kato* in View of *Clough*, *Young*, or *Winkelman*.**

Inline failed to provide any “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). Instead, the Board invalidated the claims of the ‘078 patent as obvious based almost entirely on a ground that was rejected for institution – obviousness over *Kato* alone. In doing so,

the Board ignored that the motivation to combine *Kato* with the various secondary references offered by Inline – the party with the burden – was demonstrably not credible and improperly disregarded Graphic’s proven evidence of nonobviousness, particularly secondary considerations of nonobviousness. At bottom, the Board improperly put the burden of proving nonobviousness on Graphic. Accordingly, the Board’s determination of obviousness should be reversed.

**B. The Board Improperly Placed a Burden of Proving Nonobviousness on Graphic**

The Board’s error begins with its belief that “Petitioner’s express claim mapping is set forth in their claim charts,” (Appx32), and that “Petitioner is only advocating for modifying *Kato* to include one feature of Clough: the microwave energy interactive material.” Appx33. The same rationale is later applied to the combinations with *Young* and *Winkelman*. Appx67; Appx77-78. This conclusion is not supported by rational underpinnings.

**1. The Board Makes Critical Errors and Omissions With Respect to its Analysis of *Kato***

First, the “express claim mapping” that the Board expressly relies on as supposedly “set forth in [Inline’s] claim charts” is non-existent. *See* Appx32. As discussed at length in Patent Owner’s Preliminary Response, the Petitioner did not provide any claim charts at all and thus failed to comply with the requirements of 37 C.F.R. § 42.104(b)(4) to clearly identify which patents or printed publications

form the basis for its obviousness assertions. *See, e.g.*, Appx217-223. The Board failed to even acknowledge this in instituting review (Appx259-291) and then, to compound this error, incorrectly pointed to non-existent claim charts in its Final Written Decision. Appx32.

Second, the Board states:

Patent Owner makes additional assertions concerning the differences between *Kato* and *Clough*, such as the number of sides, whether there are end panels, and the locations of disruption lines. [Appx333-334 (citing Appx1151, Appx1314, Appx1329, Appx1670, Appx1682, Appx1885)]. They have been considered, but are inapposite, in that Petitioner is only advocating for modifying *Kato* to include one feature of *Clough*: the microwave energy interactive material.

Appx32-33. The Board is incorrect. Not even *Inline* asserts that *Kato* teaches each limitation of the '078 patent other than microwave energy interactive material. Instead, each of the combinations asserting *Kato* as the primary reference – i.e., all of the grounds that the Board found to invalidate – is based on first modifying the *Kato* construct to add microwave energy interactive material taught by each of the prior art microwave heating packages (or blanks) and then further modifying it to add other design features of prior art microwave heating packages (or blanks). For example, *Inline* also relies on *Clough* for apertures and lines of disruption (Appx181-182); *Young* for apertures, a free edge extending in a second direction, lines of disruption, a bottom seam (i.e. a first and second major panel and partial

end flaps), partial end panels, and collinear edges (Appx164-167; Appx169-172; Appx188); and *Winkelman* for apertures, lines of disruption, a bottom seam, partial end panels, and side edges of end panels substantially equal in length (Appx167-168; Appx170; Appx17; Appx182). None of these limitations of the ‘078 claims – each of which is necessary for effective browning and crisping– are taught by *Kato*. See Appx332-334; Appx342-343; Appx345-346; Appx355. As discussed at length in Section III, *infra*, Inline also relies on the supposed common sense of a POSA for claims 20 and 29’s “side edges of the first end panel and side edges of the second end panel are substantially equal in length” and claims 34, 39, 42, and 47’s “free edge of the blank extending in the second direction,” which are limitations not taught by either reference in various combinations.

A patent challenger must identify a reason that would have prompted a POSA to combine the elements. See *KSR*, 550 U.S. at 418 (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”) (quoting *Kahn*, 441 F.3d at 988). As the basis for its finding of a motivation to combine *Kato* with the various browning and crisping constructs, the Board stated that “we find explicitly and unequivocally that it was widely and well-known, at the time of the claimed invention, to add microwave energy interactive material to a paperboard sleeve in order to brown

and crisp food.” Appx31; *see also* Appx28. However, this “common knowledge” is irrelevant to the issue here. *See In re Van Os*, 844 F.3d 1359, 1361 (Fed. Cir. 2017) (“Absent some articulated rationale, a finding that a combination of prior art would have been ‘common sense’ or ‘intuitive’ is no different than merely stating the combination ‘would have been obvious.’ Such a conclusory assertion with no explanation is inadequate to support a finding that there would have been a motivation to combine.”). While a POSA may have been aware that microwave energy interactive material could be added to a package in order to heat (brown and crisp) the contents, why would that person add such material to *Kato*’s sleeve when the contents of that sleeve had already been heated before being placed in the sleeve, such that addition of the material would serve no purpose? Appx1671 ¶¶ [0004-0005]. There would be no motivation for a POSA to add a useless feature to a prior art product.

The Board, at Petitioner’s urging, impermissibly oversimplified the claims of the ‘078 patent to set up a strawman, finding that it would have been obvious to place microwave energy interactive material on *Kato*’s paperboard. However, the combination that Petitioner asserts is far more complex. It is not simply a question of adding microwave energy interactive material to *Kato*; the various asserted combinations require that step plus reconfiguring *Kato* in a number of ways, each of which (as discussed below) would inhibit *Kato*’s construct from performing its

stated purpose. For example, Graphic explained – via testimony of Dr. Floros, who Inline declined to cross-examine on this issue or otherwise – the changes that would have to be made to *Kato* in view of *Young* to arrive at the ‘078 claims:

[B]eginning with FIG. 10J of *Young*, one skilled in the art would have to modify *Kato* to: (1) deconstruct the package to form a blank; (2) add end flaps (which are only vaguely mentioned in passing in *Young* ([Appx1312] ¶ [0097]) and not shown or described in any detail); (3) cut the end flaps to form partial end flaps as recited in the ‘078 Patent; and then, in view of “modified *Young*”, (4) change the shape of each panel of the *Kato* blank to provide perpendicular edge configurations; (5) reconfigure the panels of *Kato* to form first and second major panels and first and second partial end flaps; (6) add apertures; and (7) add microwave energy interactive material to the container of *Kato* to convert it from a carrying container to a microwave heating construct. [Appx1711-1713] ¶ 47. This level of modification – completely redesigning, reconstructing, and changing the purpose of *Kato*’s container or blank – cannot reasonably said to be “obvious.” *Id.*

Appx342-343. Each of these changes is necessitated specifically by the requirements of a cooking construct. Appx1700-1701 ¶ 30; Appx1711-1713 ¶ 47; Appx342-343. These are features absent from *Kato* because – as the Board acknowledged – it was not intended for cooking. Appx26-27.

## **2. The Board Fails to Provide Articulated Reasoning With Some Rational Underpinning to Modify *Kato*, and Such Modifications Detract from its Stated Purpose**

The law is clear that all evidence relating to obviousness must be considered in its entirety before making an obviousness determination. *See In re*

*Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1075-80 (Fed. Cir. 2012). However, ignoring *Kato*’s own stated purpose, the Board stated in the Final Decision that Graphic took the position that “a modification not contemplated in a reference is a modification that cannot be made.” Appx28. That is untrue. Instead, Graphic asserted that it would not be obvious to modify a reference where there is no reason to do so – particularly in a way that undermines the reference’s ability to achieve its purpose. The Board analogizes:

As an example, assume the claimed invention is to a black coat, and also assume that reference A discloses a coat that is colored white in order to reflect heat, and that reference B discloses clothing can be colored black in order to absorb heat. Under Patent Owner’s logic, one of ordinary skill would never modify the coat of reference A to be black so as to absorb heat, in view of reference B, because reference A does not disclose either the color or the need to absorb heat. Such a rubric is not credible.

Appx29. On its face, the Board’s analogy is flawed. A POSA may be motivated to take the white coat of reference A and add vents to further cool the wearer or even to use waterproof material (having nothing to do with A’s stated purpose). However, modifying the white coat of reference A to be black, which would result in the coat absorbing heat, would undermine and frustrate reference A’s stated purpose of reflecting heat. *See DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1326 (Fed. Cir. 2009) (“Although predictability is a



touchstone of obviousness, the ‘predictable result’ discussed in *KSR* refers not only to the expectation that prior art elements are capable of being physically combined, but also that the combination would have worked for its intended purpose.”) (citing *KSR*, 127 S. Ct. at 1739-40). This is not to say no one would be motivated to create a black coat, just that it would not be obvious to do so by modifying reference A’s white coat in a way that would prevent it from achieving its purpose. For exactly this reason, one skilled in the art would not be motivated to modify *Kato* in ways that would prevent it from effectively containing “ready-to-eat” food. Appx1671 ¶ [0004-0005].

In addition, the Board also improperly considers only the modifications to *Kato* necessary to read on the independent claims of the ‘078 patent. The Board’s analysis improperly disregards the additional limitations found in the dependent claims. In *Circuit Check Inc. v. QXQ Inc.*, this Court reversed a judgment as a matter of law of invalidity where the district court failed to consider the additional limitations of the dependent claims, finding that “there must be evidence presented on the obviousness of the claim as a whole.” 795 F.3d 1331, 1337 (Fed. Cir. 2015) (citing *KSR*, 550 U.S. at 420); *see also Sanofi–Synthelabo v. Apotex, Inc.*, 550 F.3d 1075, 1086 (Fed. Cir. 2008) (“The determination of obviousness is made with respect to the subject matter as a whole, not separate pieces of the claim.”) (citation omitted).

Here, the additional limitations of the dependent claims, when added to *Kato*, would prevent the construct from achieving its stated purpose of preventing the “ready-to-eat” food from dirtying the hands of the consumer and keeping the food in a sanitary or hygienic condition. Appx1671 ¶ [0004-0005]. For example, the Board incorrectly states:

[W]e are unpersuaded that modifying the handheld sleeve of *Kato* with the microwave energy interactive material of *Clough* also requires importing the apertures of *Clough* into *Kato*. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference . . . . Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art.”).

Appx32. Plainly, in order to meet all the limitations of the dependent claims, modifying the handheld sleeve of *Kato* requires the importing of apertures of *Clough*. Claims 3, 13, 23, 38, 41, 46 and 53 recite “aperture[s].” *See, e.g.*, Appx117 at 22:53-54. Adding these holes in the construct would necessarily be inconsistent with preventing the “ready-to-eat” food from dirtying the hands of the consumer, as *Kato* demands. Appx1671 ¶ [0004]. The Board’s hand-waving about a POSA being able to place or size them to prevent sauces from dirtying hands (Appx32) has absolutely no evidentiary support beyond Dr. Sand’s conclusory statements, provided only in response to Graphic’s arguments, despite Inline’s burden to prove obviousness. It also ignores the specific placement of the

apertures required by the ‘078 patent claims, which addresses and solves this problem. Appx117 at 22:53-54; Appx118 at 23:51-52, 24:56-57; Appx120 at 27:18-19, 28:1-2; Appx121 at 29:11-12, 30:52-53.

In finding that a POSA would modify *Kato* in the various ways necessary to arrive at the ‘078 claims, the Board adopted Dr. Sand’s conclusory assertion that *any* modification to *Kato* to allow for cooking would have been obvious to a POSA. Appx28-30. However, the law is clear that such statements are simply not enough. *See Icon Health & Fitness v. Strava, Inc.*, 849 F.3d 1034, 1046 (Fed. Cir. 2017) (merely incorporating attorney argument or similar expert testimony on legal issues into a final decision does not usually qualify as “substantial evidence”).

For example, in *In re Sang-Su Lee*, the Board adopted the examiner’s statements during prosecution that combining two prior art references to achieve the claimed invention – a method of automatically displaying the functions of a video display device and demonstrating how to select and adjust the functions – would have been obvious to a POSA. 277 F.3d 1338, 1341 (Fed. Cir. 2002). This Court vacated the Board’s decision, holding that “[c]onclusory statements such as those here provided do not fulfill the agency’s obligation” to explain all material facts relating to a motivation to combine. *Id.* at 1344.

In taking the position that *any* modification to *Kato* to allow for cooking would have been obvious to a POSA, the Board never addressed ample evidence

presented by Graphic as to the technology and the specificity with which the various elements of these constructs intended for microwave cooking are employed. *See e.g.*, Appx1700-1705 ¶¶ 30-35 (citing Appx1955-1976). The Board also ignored that the only “reason” for these modifications is provided by Graphic’s patent claims – the definition of improper reliance on hindsight. *Zoltek Corp. v. U.S.*, 815 F.3d 1302, 1313 (Fed. Cir. 2016) (“Hindsight reconstruction for litigation ends is not of probative value.”) (citation omitted); *W. L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983). In other words, the Board succumbed to the “temptation to read into the prior art the teachings of the invention at issue.” *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 36 (1966). “To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.” *W. L. Gore*, 721 F.2d at 1553.

At bottom, rather than considering the evidence relevant to obviousness as a whole, the Board improperly placed a burden of proving nonobviousness on Graphic, specifically stating that “[a]side from microwave energy interactive material and the claim limitations of independent claims 20 and 29 addressed below, Patent Owner does not identify any other specific claim limitation in any of

the independent claims that is missing from *Kato*.” Appx33. Not only is this untrue, but it ignores the limitations of the dependent claims and the petitioner’s burden of proving unpatentability. 35 U.S.C. § 316(e); *see In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1378 (Fed. Cir. 2016) (Board improperly shifted burden to patent owner to disprove obviousness).

### **3. The Motivation Provided by Inline with Regard to the Combinations is Not Credible and Is Not Substantial Evidence**

To establish obviousness of a claim under 35 U.S.C. § 103, Inline was required to prove that the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. *See KSR*, 550 U.S. at 406. However, a “patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *Id.* at 418. A patent challenger must also identify “a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements.” *Id.*; *Los Angeles Biomed. Research Inst. at Harbor-UCLA Med. Ctr. v. Eli Lilly & Co.*, 849 F.3d 1049, 1064 (Fed. Cir. 2017) (“In the case of a combination of references that together disclose all the limitations of the claimed invention, the adjudicator must determine whether there was an ‘apparent reason to combine the

known elements in the fashion claimed by the patent at issue.’”) (quoting *KSR*, 550 U.S. at 418).

The Board overlooked the requirement of an articulated reason that a POSA would arrive at the offered combinations when it decided obviousness, but Inline did *attempt* to offer one: Dr. Sand pointed to the similarities between the prior art references being combined. The Board cites to Dr. Sand repeatedly for support for its decision, but only to her declaration. The Board acts as if her deposition was never taken (in fact, it was taken twice). *See, e.g.*, Appx25; Appx30; Appx32-35; Appx63; Appx73-76. In each case, Dr. Sand’s declaration was discredited by her trial testimony.

For example, as support for Inline’s assertion that a POSA would be motivated to combine *Kato* and *Clough*, Dr. Sand opined that the two references’ similar features would provide such a motivation – including incorrectly stating that both constructs have four sides. Appx1204 ¶ 117. But *Kato* and *Clough* have substantial differences, such as *Clough*’s six sides compared to *Kato*’s four, *Clough*’s open ends compared to *Kato*’s end panel designed to be closed during use, and *Clough*’s apertures compared with *Kato*’s lack thereof. Appx333-334. During her depositions, Dr. Sand admitted – as she must – that *Clough* in fact has six sides to *Kato*’s four and does not have end panels, at all. Appx2152-2158 at 103:15 – 109:1; Appx1930 at 179:23 – 181:10.

The fact that combining the cooking characteristics of *Clough* with *Kato* would upset the ability of a consumer to utilize *Kato* for its intended purpose further erodes Dr. Sand's opinions. For example, *Kato*'s goal is to prevent the consumer from having to touch the "ready-to-eat" food. Appx1671 ¶ [0004-0005]; Appx1700-1705 ¶¶ 30-35. But if foods containing substantial amounts of liquids were heated in *Kato*'s package, liquids would escape during heating, become free to be absorbed by the cardboard, and make the package soggy and weak, thus defeating its stated purpose. Appx1700-1705 ¶¶ 30 – 35; Appx1997-1998 (PRINCIPLES OF FOOD PACKAGING, 1970); Appx2016-2017 (HANDBOOK OF PACKAGE ENGINEERING, 1998); Appx1952; Appx1955; Appx1957; Appx1960-1961; Appx1967.

Dr. Sand insists that this is not true because – even though she admits that *Kato* "receives the [already] heated food product" (Appx1914 at 114:18-21) – it is also "ideal to really use for heating food products." Appx1914 at 114:8-14; *see also* Appx1914-1915 at 114:2 – 120:21; Appx1916-1917 at 124:17 – 127:11. Dr. Sand testified that she based this opinion entirely on *Kato*'s listing of a croquette as one of many food items that could be used with the *Kato* package. Appx1895 at 39:9-21; Appx1914-1916 at 114:2 – 123:23; Appx1923-1924 at 152:18 – 154:6.

Yet a croquette is simply another food item, and Dr. Sand provided no other basis for this opinion.<sup>2</sup>

The Board likewise offered no substantial evidence to support its finding that a POSA would have had a motivation to combine *Kato*'s passive container for previously heated foods with *Young*'s interactive package that is directed to improve browning and crisping properties by absorbing excess fluids during heating. Appx64-67; *see also* Appx168-169. Citing to Dr. Sand's unsupported opinions, Inline makes the conclusory argument that the motivation stems from the fact that *Young* discloses "various types and shapes of food packaging" and thus combining *Young* with *Kato* would "yield a predictable result." Appx168-169; *see also* Appx26-33; Appx64. However, Dr. Floros presented an unrebutted opinion that modifying *Kato* with *Young* would require completely redesigning, restructuring, and repurposing *Kato*'s blank – seven steps in all – to arrive at a microwave heating construct. Appx1711-1713 ¶¶ 47-48; Appx2075-2077 at 26:5 – 28:5 (Dr. Sand admits that she did not address the substantial modifications *Kato* would require in view of *Young*). The vast divide between *Kato* and *Young* undermines any claim that a motivation to combine exists merely because *Young*

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<sup>2</sup> For the same reasons, Inline fails to provide any evidence – other than Dr. Sand's conclusory opinion that it is obvious to combine any food container with any heating elements – of a motivation to combine *Kato*'s preheated food container with *Winkelman*'s susceptor material. Appx169 (stating only that a "POSA would have found it obvious to use the susceptor material of . . . *Winkelman* in combination with *Kato* to yield a predictable result").



identifies “various types and shapes of food packaging.” *See* Appx168-169. A patent is not obvious where numerous steps would be required to transform the prior art into the claimed invention and “an ordinarily skilled artisan would not have modified that reference or combined it with others.” *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1328 (Fed. Cir. 2016) (affirming jury verdict finding patent for a marine engine not obvious over patent for a land engine and common knowledge, particularly where secondary considerations support non-obviousness).

Dr. Floros testified unequivocally and with support from literature in the art that a POSA would not have seen the point in making the proposed modifications to *Kato*. However, in reaching its Final Decision, the Board discounted entirely the declaration of Dr. Floros, which is unrebutted, saying his “testimony is unpersuasive for the same reasons as set forth above.” Appx33. Why have a trial and depositions if the Board is going to look only at the declarations and make a decision about which expert is correct? In this case, Graphic submitted a declaration (Dr. Floros’) that stands unrebutted because Petitioner declined to depose him, while Petitioner’s two declarations (both from Dr. Sand) were completely undermined.<sup>3</sup>

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<sup>3</sup> As stated in *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1080 (Fed. Cir. 2015), “The indispensable ingredients of due process are notice and an opportunity to be heard by a disinterested decision-maker” (citing *Abbott Labs. v. Cordis Corp.*, 710 F.3d 1318, 1328 (Fed. Cir. 2013)). Here, the Board’s disregard of Graphic’s evidence is tantamount to a denial of due process, in that Graphic has thereby been deprived of a meaningful opportunity to be heard by a disinterested decision-maker.

What is lacking in the Board’s decision is a convincing rationale and supporting evidence as to why one of ordinary skill in the art would have modified *Kato* to include cooking features, for example, by adding apertures, a bottom seam, a free edge extending in a second direction (i.e., straight) or, for that matter, by adding microwave energy interactive material. As the Federal Circuit has explained, “obviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.” *Belden*, 805 F.3d at 1073 (emphasis in original) (citation omitted); *see also KSR*, 550 U.S. at 418 (noting the importance of identifying “a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does”). For these reasons, the Board failed to provide an “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness” and should therefore be overturned. *Id.* at 418 (citation omitted).

**C. The Board Improperly Disregarded Graphic’s Evidence of Nonobviousness Based on Secondary Considerations**

“Objective indicia of nonobviousness must be considered in every case where present.” *Apple Inc. v. Samsung Elecs. Co., Ltd.*, 839 F.3d 1034, 1048 (Fed. Cir. 2016). However, the Board “appears to have fallen into the understandable but improper trap of constructing a selective version of the facts relating to the objective considerations so as to confirm its hunch that the asserted claims were

obvious.” *In re Cyclobenzaprine*, 676 F.3d at 1080. The evidence on secondary considerations is striking in the present case. Before the ‘078 solution, Nestlé and Mr. Schiffman failed for years to craft a package that satisfied the treble needs of: (1) holding a Hot Pockets® sandwich; (2) browning and crisping the sandwich using microwave energy; and (3) providing portability and easy opening for consumption (the “Nestlé Packaging Needs”). This struggle transpired even though – as the Board notes – “microwave packaging has been in existence for decades.” Appx48.

Graphic’s ‘078 package answered the call so well that Nestlé was willing to increase the price it paid Graphic for the package (even though Nestlé explicitly expressed a desire to cut costs) and secure a seven-year exclusivity deal with Graphic so that it would not produce the package for Nestlé’s competitors. Appx1774-1776 ¶¶ 30-31, 33; Appx1881; Appx1882. Nestlé’s sales of Hot Pockets® soared with the introduction of Graphic’s new package, and when Nestlé approached Inline as an additional supplier for the ‘078 package, Inline did not even feign independent development and simply copied Graphic’s patented design. Appx1776 ¶¶ 32, 34; Appx1882; Appx2028; Appx2029-2036; Appx2041; Appx2049; Appx2027; Appx1722 ¶¶ 69-70.

The Board found a nexus between this evidence and the package claimed in the ‘078 patent, acknowledging that a presumption of nexus between such

evidence and the patented invention arises in this scenario. Appx38-41. Yet the Board, having apparently already, and incorrectly, predetermined the claims were obvious, ignored the presumption of nexus and improperly discounted Graphic's un rebutted evidence with no basis other than speculation and guesswork. By doing so, the Board erred in dismissing Graphic's compelling objective evidence and fell into the "trap of hindsight" in finding the claims obvious. *Apple*, 839 F.3d at 1058; *Crocs, Inc. v. ITC*, 598 F.3d 1294, 1310 (Fed. Cir. 2010) ("Secondary considerations can be the most probative evidence of non-obviousness in the record, and enables the . . . court to avert the trap of hindsight.") (alteration in original, citation omitted). In other words, the Board failed to use secondary considerations as "built-in protection" to "help [ ] place a scientific advance in the proper temporal and technical perspective when tested years later for obviousness against charges of making only a minor incremental improvement." *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1378 (Fed. Cir. 2012).

**1. The Board Erred in Ignoring the Presumption of Nexus When Weighing Graphic's Secondary Considerations Evidence**

Graphic presented un rebutted objective evidence of nonobviousness showing that the '078 patent's packaging solution achieved commercial success, excelled when others failed, satisfied Nestlé's Packaging Needs, and was blatantly copied by Inline in their attempt to satisfy Nestlé's demands. Appx320-328.

During discovery and in its Reply, Inline chose not to try to undermine the substance of Graphic's secondary considerations evidence, instead arguing that Graphic failed to show a nexus between such evidence and the '078 patent's invention and that the evidence was not commensurate with the scope of the claims. Appx379-386.<sup>4</sup> And even though Dr. Sand purported to examine validity on Inline's behalf, she neglected to address an essential component of that analysis – secondary considerations. Appx1899-1890 at 54:9 – 58:19; *see InTouch Techs, Inc. v. VGO Commc'ns, Inc.*, 751 F.3d 1327, 1348-49 (Fed. Cir. 2014) (district court erred in finding claims obvious based on expert opinion that, *inter alia*, failed to “consider any objective evidence of nonobviousness” and was thus “nothing more than impermissible hindsight”).

The Board rejected both of Inline's theories, finding that there was a nexus between Graphic's secondary considerations evidence and the patented invention that applied equally across the claims. Appx40. This finding – that the objective evidence is tied to Graphic's product and that product is an embodiment of the '078 patent's invention – should have given rise to a presumption of nexus. *See* Appx38 (citing *WBIP*, 829 F.3d at 1329). Yet when the Board addressed Graphic's evidence, it disregarded the presumption of nexus and wholly discounted

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<sup>4</sup> The only complaint Inline makes regarding the substance of Graphic's evidence is that Graphic should have provided a “complete sales history” of the '078 package. Appx381.

any secondary considerations, in spite of the absence of any rebuttal evidence (expert or otherwise) from Inline. While the “presumption of nexus is rebuttable” in that “a patent challenger may respond by presenting evidence that shows the proffered objective evidence was due to extraneous factors other than the patented invention,” a “patent challenger cannot successfully rebut the presumption with argument alone – it must present evidence.” *WBIP*, 829 F.3d at 1329 (quotation omitted).

Inline failed to rebut Graphic’s objective evidence with anything other than rejected arguments regarding nexus and commensurate scope. But the Board purported to take on Inline’s mantle, speculating that Graphic’s secondary considerations may be due to external factors other than the merits of the claimed invention.<sup>5</sup> Still, the Board did not present any evidence to rebut the presumption of nexus, relying only upon conjecture and argument.

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<sup>5</sup> The Board’s effort to rebut Graphic’s evidence in Inline’s stead is itself erroneous where, as here, the Board’s role is limited to reviewing evidence of obviousness in an adversarial proceeding, as opposed to a decision on the patentability of an application where the “PTO necessarily has the burden to establish a *prima facie* case of obviousness which the applicant then rebuts.” See *Leo Pharm. Prods., Ltd. v. Rea*, 726 F.3d 1346, 1358 (Fed. Cir. 2013) (finding that the Board erred in discounting secondary considerations, stating, “during *inter partes* reexamination, the Board is reviewing evidence of obviousness—including objective indicia—submitted by two adversarial parties for the claims of an issued *patent*. Thus, the Board should give the objective indicia its proper weight and place in the obviousness analysis, and not treat objective indicia of nonobviousness as an afterthought.”) (emphasis in original).

For example, in overlooking the presumed nexus between the commercial success and the claimed invention, the Board – all without supporting evidence: discounted Mr. Voyzey’s declaration and unrebutted evidence regarding price increases and the seven year exclusivity period with Nestlé simply because he is Graphic’s employee; speculated that the price increases could have been due to other factors; doubted the very existence of the exclusivity period and that it was unusually long; and made a conclusory finding that other factors could have affected sales. Appx42-46.

The Board’s unsupported arguments fail to rebut the presumed nexus between the ‘078 patent’s invention and the improved sleeves sold to Nestlé. *See J.T. Eaton & Co., Inc. v. Atlantic Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997) (“When a patentee can demonstrate commercial success, usually shown by significant sales in a relevant market, and that the successful product is the invention disclosed and claimed in the patent, it is presumed that the commercial success is due to the patented invention.”) (emphasis added).

The Board’s reliance on *In re Baxter Travenol Labs.*, 952 F.2d 388 (Fed. Cir. 1991) and *In re Huang*, 100 F.3d 135 (Fed. Cir. 1996) to undermine Graphic’s evidence showing the improved sleeve’s success in the market exemplifies the Board’s failure to apply the presumption of nexus. Appx45. *Baxter* and *Huang* each involved appeals in *ex parte* proceedings where the presumption of nexus

does not arise. *See PPC Broadband, Inc. v. Corning Optical Commc'ns RF, LLC*, 815 F.3d 734, 746-47 (Fed. Cir. 2016) (finding the Board erred in failing to apply the presumption of nexus, stating that the “presumption does not apply in the ex parte context” but does “apply in contested proceedings, such as IPRs, where the petitioner has the means to rebut the patentee’s evidence,” and petitioner had not disputed such evidence).

Similarly, the Board presumed without support that Graphic’s evidence of a long-felt need for the ‘078 packaging solution is insufficient because Nestlé was the only party that identified the need and that a four year period is not “long-felt.” Appx48. The Board’s contentions, lacking evidence, fall far short of rebutting the presumption of nexus accompanying Graphic’s secondary considerations of nonobviousness.

## **2. The Board Erred in Predetermining Obviousness Before Weighing Secondary Considerations**

It is evident from the Board’s decision that it determined obviousness before it considered Graphic’s objective evidence and shifted the burden to Graphic to rebut obviousness with secondary considerations. This Court has made clear that placing the burden on the patentee to disprove obviousness with objective evidence is inappropriate, and the Board should have considered evidence of secondary considerations as part and parcel of its analysis. *See In re Cyclobenzaprine*, 676 F.3d at 1075-76; *In re Magnum*, 829 F.3d at 1376 (holding that the ultimate burden



of persuasion of obviousness must remain on the patent challenger and a fact finder must consider *all* evidence of obviousness and nonobviousness before reaching a determination).

The Board's presupposition of obviousness prior to reaching secondary considerations is unmistakable. At its core, the Board's decision rested on a determination that it was obvious to modify *Kato's* paperboard sleeve to add *Clough's* microwave interactive material for browning and crisping a food item in a microwave. Appx26-27. Before any mention of objective evidence of nonobviousness, the Board prematurely found that the asserted claims were obvious: "[w]e agree with Petitioner that one skilled in the art . . . would have had ample reason to modify and improve *Kato's* paperboard sleeve to brown and crisp food using *Clough's* known technique of adding microwave interactive material to a sleeve to realize the advantages set forth in *Clough*." Appx27; *see also* Appx28; Appx31.

Because *Graphic's* secondary considerations evidence is "crucial in avoiding the trap of hindsight when reviewing, what otherwise seems like, a combination of known elements," the Board erred when it "defer[red] examination of the objective considerations until after" the Board made its obviousness determination. *Leo Pharm.*, 726 F.3d at 1357-58; *Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1365 (Fed. Cir. 2008) (secondary considerations "may often be the

most probative and cogent evidence of nonobviousness in the record” and are “not just a cumulative or confirmatory part of the obviousness calculus but constitutes independent evidence of nonobviousness”) (citations omitted).

### **3. The Board Erred in Using Speculation to Discount Graphic’s Unrebutted Secondary Considerations Evidence**

Setting aside the Board’s failure to apply the presumption of nexus and to address secondary considerations prior to finding obviousness, the Board’s undercutting of Graphic’s secondary considerations is not supported by substantial evidence or law. In fact, the Board bases its arguments on conclusory speculation and evidence not in the record, citing and agreeing with Inline’s substantive arguments with respect to secondary considerations only four times over the course of the Board’s eighteen page discussion of secondary considerations. Appx45-46, 48. The Board’s employment of guesswork and incorrect legal application of case law occurred in numerous ways:

*First*, the Board dismissed Mr. Voyzey’s factual testimony because he is an employee of an interested party and thus the overwhelming evidence of commercial success was “heavily discounted.” Appx42. Despite Inline failing to discredit Mr. Voyzey’s testimony, the Board created its own rationale, citing to *Finnegan Corp. v. Int’l Trade Comm’n*, 180 F.3d 1354, 1369 (Fed. Cir. 1999) for the proposition that Mr. Voyzey’s assertions should be automatically discounted because he works for Graphic. *Finnegan* does not support the Board’s position,

instead addressing situations where corroborating evidence is required to validate testimony relating to a claim of derivation or priority of invention. *Id.* This simply does not apply here, as the Board must rely on Graphic to present evidence of commercial success. *See In re Huang*, 100 F.3d at 140 (“[T]he PTO must rely upon the [patent] applicant to provide hard evidence of commercial success.”). Moreover, Mr. Voyzey’s testimony was indeed corroborated by numerous exhibits included with his declaration and ignored by the Board. *See Appx1766-1776 ¶¶ 11-32.*

The Board’s unsupported and conclusory arguments are insufficient to support its decision to disregard Graphic’s evidence of nonobviousness – evidence Inline neglected to challenge. *See In re Huai-Hung Kao*, 639 F.3d 1057, 1069 (Fed. Cir. 2011) (“Because the Board ignored the evidence of record and relied instead upon its own conjecture, its treatment of [patent owner’s] argument regarding unexpected results was improper.”); *see also Institut Pasteur & Universite Pierre Et Marie Curie v. Focarino*, 738 F.3d 1337, 1347 (Fed. Cir. 2013).

The Board likewise states that Graphic’s price increases “presumably” include some sales of the former sleeve and “discern[ed]” that the prices cover patented and non-patented sleeves. Appx43-44. The Board’s presumptions contradict Mr. Voyzey’s unrebutted testimony that the figures refer to prices for the improved, patented sleeves. Appx1776 ¶ 32. And the Board brushed aside

Graphic's seven year exclusivity agreement with Nestlé without reason, postulating that it may not exist or that seven years is not a significant amount of time – both in direct contradiction to Mr. Voyzey's unrebutted testimony. Appx44.

In declining to find merit in Graphic's evidence of sales success, the Board appears to suggest that Graphic should have provided the number of units sold in the context of market share. Appx45. Substantial evidence does not support the Board's finding, as Graphic presented evidence that it controlled 100% of the market share for the sleeves. Appx1777 ¶ 33. Even Inline acknowledged that Graphic's patented sleeve captured 100% of the market. Appx381.

The Board's unsupported and conclusory arguments are insufficient to support its decision to disregard Graphic's evidence of nonobviousness – evidence unchallenged by Inline. *See In re Huai-Hung Kao*, 639 F.3d at 1068-69 (“Because the Board ignored the evidence of record and relied instead upon its own conjecture, its treatment of [patent owner's] argument regarding unexpected results was improper.”); *Institut Pasteur*, 738 F.3d at 1347 (Board erred when determining that licensing evidence may have been related to unclaimed technology, stating that this “theoretical possibility does not undermine the strong probative value of the licensing of the [patent at issue]”).

*Second*, the PTAB found no evidence of “failure of others” because Nestlé's and Mr. Schiffman's failures were numerically insufficient. Appx46-47. As

support, the Board cited to *In re Allen*, 324 F.2d 993, 997 (C.C.P.A. 1963), but neither *Allen* nor this Court’s jurisprudence support a conclusion that there is a numerical limitation on the number of “others” that need to fail before the evidence can be credited as supporting nonobviousness. *See, e.g., In re Cyclobenzaprine*, 676 F.3d at 1081-82 (finding that the failure of a single pharmaceutical company supported a finding of nonobviousness); *DePuy*, 567 F.3d at 1328-29 (finding evidence that the accused infringer failed in its design efforts and instead copied the claimed invention sufficient to support a conclusion of nonobviousness).

*Third*, the Board found no evidence of long-felt but unmet need because the time period of “four years is not ‘long-felt,’ especially where microwave packaging has been in existence for decades.” Appx48. But the Board cites to no law supporting a conclusion that four years cannot be “long-felt.” *Id.* And it is precisely because – as the Board found – “microwave packaging has been in existence for decades” that four years is a long period of time for an unsolved need to exist; if the microwave packaging industry is so well-developed, then any period of delay in constructing a packaging solution is “long-felt.” Appx48.<sup>6</sup>

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<sup>6</sup> The Board further ignored that Graphic’s own struggles over that period to solve the Nestlé Packaging Needs supports a finding of a long-felt but unsolved need. *See Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1335 (Fed. Cir. 2013) (Patentee’s “own attempts and resultant failures support the jury’s findings” of nonobviousness.).

In a further contradiction, the Board found that Graphic had not identified that the Nestlé Packaging Needs were needs that “others” recognized because it was Graphic itself that identified them. Appx48. Yet in the same paragraph, the Board states that the Nestlé “communicated” its “own needs” to Graphic, showing that it was Nestlé – an “other” – who identified the need for an improved package. *Id.*

Finally, despite finding that Inline “undeniably copied [Graphic’s] improved sleeve design,” the Board found Inline’s wrongdoing carried “less weight when the manufacturer [Inline] had not expended great effort to develop its own solution.” Appx54-55 (citing *Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 318 (Fed. Cir. 1985)). Unlike Inline’s unabashed and wholesale copying, the accused infringer’s product in *Pentec* “is not identical to the claimed invention, and [Pentec] vigorously denied infringement.” *Pentec*, 776 F.2d at 317. Here, there was no evidence of Inline’s great expenditure of resources to develop its own solution since it chose instead to simply knock-off Graphic’s patented design.

Under the Board’s rationale, accused infringers are better off copying the invention without even trying to design-around; blatant plagiarizing is more palatable. This Court’s precedent does not support such a legal construct. *See Circuit Check*, 795 F.3d at 1336-37 (finding evidence of copying supports nonobviousness where the accused infringer developed its infringing products after

a customer saw an embodiment of the patented product in the market and requested that the defendant copy it).

**D. The Board Erred in Finding that the Asserted Combinations Teach Each and Every Limitation of the Claims**

The Board denied institution of the IPR on the ground that *Kato* and knowledge of a POSA was enough to render the claims obvious. Yet that is precisely what the Board relied upon in reaching its decision. The Board’s analysis, which rests on Dr. Sand’s discredited testimony, is therefore both procedurally deficient in its finding of obviousness based on *Kato* alone, a ground expressly rejected in the Institution Decision (Appx289-291), and legally insufficient in accepting conclusory allegations of “general knowledge” in lieu of actual teaching of a claim limitation that plays a major role in the subject matter claimed. *See Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993-94 (Fed. Cir. 2017) (remanding the Board’s finding of obviousness as inadequate due to its failure to explain and support its conclusion that, *inter alia*, the prior art discloses all of the elements recited in the challenged claims).

**E. The Combination of *Kato* and *Winkelman* Fails to Teach a Free Edge Extending in the Second Direction**

Independent claims 34, 39, 42, and 47 recite that “the free edge of each the main panel, first minor panel, second minor panel, first major panel, and second major panel collectively define a free edge of the blank extending in the second

direction.” Appx119 at 26:51-54; Appx120 at 27:42-45, 28:26-29; Appx121 at 29:34-37. The Board explained in its Institution Decision that *Kato* alone does not disclose this element. Appx278. The Board then acknowledged in its Final Written Decision that “neither *Kato* nor *Winkelman* expressly disclose the aforementioned claim limitation.” Appx75. Nevertheless, without any rational underpinnings for doing so, the Board then substituted Dr. Sand’s general knowledge to modify *Kato* to meet the limitation. Appx76.

The Board’s decision is procedurally deficient and contrary to its own rules. Graphic was not on notice that this assertion was in play since the Board expressly rejected Inline’s asserted ground of obviousness in view of *Kato* and general knowledge, and it was not part of the trial. *See Dell Inc. v. Acceleron, LLC*, 818 F.3d 1293, 1301 (Fed. Cir. 2016) (procedural rights of parties include prior notice and the opportunity to respond to arguments and evidence presented); *Cox Commc’ns, Inc. v. AT&T Intellectual Prop. II, L.P.*, IPR2015-01187, Paper 59 at 17 (P.T.A.B. Nov. 15, 2016) (declining to consider arguments based on a ground that was not instituted); *see also Office Patent Trial Practice Guide*, 77 Fed. Reg. 48,756, 48,768 (Aug. 14, 2012) (“A party . . . may only present arguments relied upon in the papers previously submitted. No new evidence or arguments may be presented at the oral argument.”).



The Board’s decision to supply elements missing from the asserted art based on “common sense” or the general knowledge of a POSA is also legally deficient as contrary to established Federal Circuit case law. *See, e.g., K/S Himpp v. Hear-Wear Techs., LLC*, 751 F.3d 1362, 1366 (Fed. Cir. 2014) (affirming Board decision finding claims not obvious where the combination did not teach certain elements of the claims that were alleged by petitioner to be generally known in the art). For example, in *Arendi S.A.R.L. v. Apple, Inc.*, the Court found that “references to ‘common sense’ . . . cannot be used as a wholesale substitute for reasoned analysis and evidentiary support, especially when dealing with a limitation missing from the prior art reference specified” and “the Board’s utter failure to explain the ‘common knowledge and common sense’ on which it relied is problematic.” 832 F.3d 1355, 1362 (Fed. Cir. 2016) (citations omitted). There, the Board found that it would be “reasonable to presume, as a matter of common sense” that a POSA reading the prior art’s teaching on deduplication of address book entries would search for duplicate phone numbers and information associated with such numbers. This Court disagreed, finding that, while common sense can certainly be invoked to provide a known motivation to combine, it cannot be used as a substitute for teaching a claim limitation that “plays a major role in the subject matter claimed” and “cannot be used as a wholesale substitute for reasoned analysis and evidentiary

support, especially when dealing with a limitation missing from the prior art references specified.” *Id.* (citations omitted).

Similarly, in *Hear-Wear*, the Federal Circuit upheld the Board’s decision “declin[ing] to accept a conclusory assertion . . . about general knowledge in the art without evidence on the record, particularly where it is *an important structural limitation that is not evidently and indisputably* within the common knowledge of those skilled in the art.” *Hear-Wear* at 1365-66 (emphasis removed and added). Addressing the claim limitation of “a plurality of prongs that provide a detachable mechanical and electrical connection,” the Court found that “[t]he determination of patentability of claims with this limitation therefore requires a core factual finding, and as such, requires more than a conclusory statement from either [petitioner] or the Board.” *Id.* at 1365. (citation omitted).

As in *Arendi* and *Hear-Wear*, this is not a question of substituting common sense or common knowledge for “peripheral” limitations. Dr. Floros, in his un rebutted declaration, testified that the free edge that does not extend in the second direction would “cause uneven access to the microwave energy interactive material and thus uneven cooking if implemented on a package designed for use in the microwave.” Appx1720-1721 ¶ 65. The construct would therefore fail to satisfy one of the two essential functions or purposes of the ‘078 patent.

The Board improperly accepted “a conclusory assertion from a third party about general knowledge in the art *without evidence on the record*, particularly where it is an important [ ] limitation that is *not evidently and indisputably* within the common knowledge of those skilled in the art.” *Arendi* at 1363 (citing *Hear-Wear* at 1365-66) (emphasis altered and added). Certainly, Dr. Sand’s unsupported assertion that “[i]t would have been obvious to a POSA to modify *Kato* to have a free edge extending solely in a second direction to form an opening with a straight end which would be easier and cheaper to design and manufacture” (Appx76 (citing Appx1238 ¶ 188)) does not substitute for actual evidence in the record that this claim limitation was evidently and indisputably within the common knowledge of those skilled in the art. The Board ignored Graphic’s explanation of the essential differences between cooking and transportation constructs that were supported by both expert testimony and publications in the field describing these critical differences. Appx307-308. Instead, the Board adopted Inline’s general mantra that any change to *Kato* necessary to create a cooking construct would be obvious – regardless of whether taught by the asserted references and ignoring the negative effect on *Kato*’s performance of its stated function. Appx26-33. This is exactly the type of “conclusory statements and unspecific expert testimony” that this Court has rejected. *Arendi* at 1366. It was Inline’s burden to provide such evidence, and it failed to meet that burden.

In addition to improperly substituting supposed common sense for a material limitation, the Board also incorrectly claimed that “Patent Owner does not address this modification.” Appx76. This is untrue. The referenced modification is presented solely in Dr. Sand’s declaration and referenced in the Petition only as part of a string cite in support of Inline’s separate and rejected assertion that *Kato* itself discloses this limitation. Appx76 (citing Appx170-171).<sup>7</sup> Nevertheless, in response to Dr. Sand’s assertion, Graphic’s own expert specifically explained:

*Kato* is intended to have a shorter side allowing the consumer to access the food item during consumption and to have a longer side preventing direct contact with any surface in the event that the consumer puts it down during consumption. Such a design is ideal for a package designed solely for transport and consumption of “ready-to-eat” food products. However, such a design would cause uneven access to the microwave energy interactive material and thus uneven cooking if implemented on a package designed for use in the microwave.

Appx1720-1721 ¶ 65. In short, Graphic’s expert explained that this particular aspect of *Kato* was designed specifically to meet the stated purpose of *Kato* and that modifying it as suggested would inhibit its ability to perform that function. Graphic cited its expert’s testimony in its Patent Owner Response (Appx345), and

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<sup>7</sup> The Code of Federal Regulations requires the entire analysis of unpatentability to be contained within the petition and not merely incorporated by reference from a supporting expert declaration or other document. 37 C.F.R. § 42.6(a)(3). In fact, the Board has denied institution after refusing to consider certain evidence improperly incorporated by reference because the IPR petition itself was deficient in showing the claims were unpatentable. *Cisco Sys., Inc. v. C-Cation Techs., LLC*, IPR2014-00454, Paper 12 at 13-15 (P.T.A.B. Aug. 29, 2014).

Inline did not dispute this conclusion.<sup>8</sup> Graphic’s position was clear – neither *Kato* nor *Winkelman* disclose the aforementioned claim limitation. The Board agreed and yet found this limitation was supplied by “general knowledge” without any rational underpinnings for doing so.

**F. *Kato* in Combination with *Clough* or *Winkelman* Fails to Teach Substantially Equal Side Edges of End Panels**

Independent claims 20, 29, 42, and 47 each recite some variation of “the side edges of the first end panel and the side edges of the second end panel are substantially equal in length with respect to one another.” Petitioner did not assert, and the Board did not find, that either *Clough* or *Winkelman* taught this limitation, instead looking again only to *Kato* with regard to this element. Appx33-35, Appx77. The Board did not conclude that *Kato* anticipates this claim limitation, instead finding that *Kato* alone renders this limitation obvious. Appx34-35. Once more, the Board’s decision is without rational underpinnings.

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<sup>8</sup> Dr. Sand testified in her responsive declaration that “the ‘longer side’ Dr. Floros refers to is ‘knob 5,’ which is a finger grip upon carrying when it is folded outward . . . .’ [Appx1280-1281 at [0015]],” and “[a] POSA would know that ‘knob 5’ is extraneous to the cooking process and that there really is no ‘longer’ or ‘shorter’ side with respect to the areas of *Kato* that would be used to brown and crisp.” Appx1495 ¶ 56. However, Inline has not argued – nor could it – that without the knob, the free edge of *Kato* would extend in a second direction.

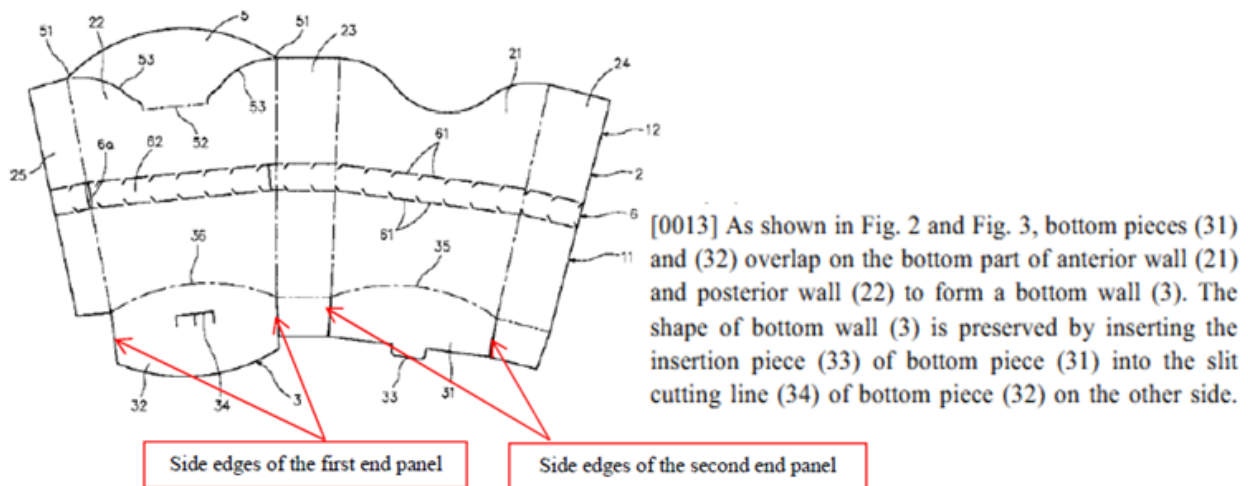
In reply, Inline likewise did not dispute Dr. Floros’ conclusion, only providing attorney argument that the claims of the ‘078 patent “contain no performance requirements.” Appx379. Of course they do not; they claim the construct that will achieve performance requirements, which include a free edge extending in a second direction. Appx1720-1721 ¶ 65; Appx491 at 26:47-53

The Board again improperly substituted supposed common sense for “*an important structural limitation that is not evidently and indisputably* within the common knowledge of those skilled in the art.” *Hear-Wear* at 1365-66. In rendering its decision, the Board simply adopts a quote from the Petition stating:

*Kato* discloses that “dimensions of the container body 1 are designed by matching a croquette, which has common size as the bulky food F, and needless to say, the design can be changed according to the types and size of the bulky food F.” [Appx1280 ¶ 0014]; *See also* [Appx1278 ¶ 0007, Appx1279-1280 ¶ 0011]. Based on these teachings, it would have obvious to a POSA to make the edges equal in length to increase the swelling of the opposing main panels to accommodate a thicker food product. [Appx1212 ¶ 137, Appx1242 ¶ 200, Appx1254 ¶ 236].

Appx34-35. The Board claims that “Patent Owner does not present any arguments against Petitioner’s obviousness assertions.” Appx34. Again, this is untrue.

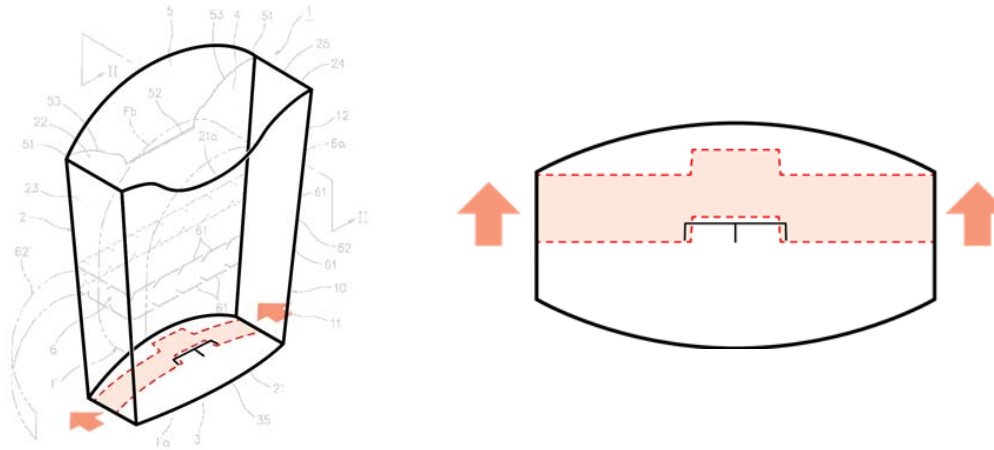
First, merely stating that a modification *can* or *could* be made does not make it obvious. *Cox Commc’ns.*, IPR2015-01187, Paper 59 at 18. Moreover, on its face *Kato* makes clear that the basis for the intentional disparity in the sides of the first and second end panel is to allow the tab to be inserted in the slit.



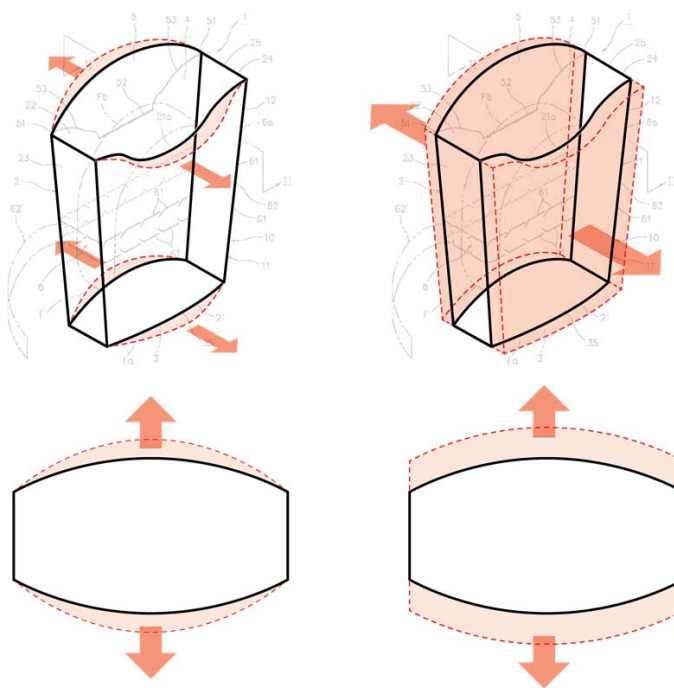
Appx1672 ¶ 13; Appx1674 at Fig. 3 (annotated). Graphic explained this in its Response, as did its expert. Appx329 (“*Kato* clearly teaches that the sides of the second end panel extend only to the point of the slit of the first end panel such that the tab protruding from the second end panel of *Kato* can be inserted in such slit.”); Appx1716 ¶ 57 (“The side edge of the end panel of *Kato* containing the tab is intentionally shorter than the side edge of the end panel of *Kato* having the slit to allow for the tab to be inserted into the slit in an easy and consumer friendly way.”). In fact, Dr. Floros explained exactly why a POSA would know not to modify *Kato* in the way suggested by the Board: “If the two panels were ‘substantially equal in length’ the tab from one panel would not fit into the slit of the other panel as shown in FIG 3 of *Kato*.” Appx1716 ¶ 57.

As explained by *Kato* ¶ 13 and illustrated by *Kato* figure 5 as annotated below – and contrary to the Board’s analysis – increasing the length of the side edges of the second end panel to match the first would not have any effect on the

“swelling of the opposing main panels.” This change would simply prevent *Kato*’s tab from engaging in its slit. Appx1716 ¶ 57.



See Appx1674 at FIG. 5 (annotated). The only things that would change the “swelling” to accommodate a change in the dimensions of the food item are an increase in the arc of the arcuate fold lines or an increase of the length of the side edges of the first end panel, both shown below.





See Appx1674 at FIG. 5 (annotated).

The closing feature of the '078 patent is a material limitation, central to achieving its stated purpose of “facilitat[ing] transportation and consumption of a food item therein.” Appx512 at 1:25-29. Once again, the Board’s improper substitution of supposed common sense or general knowledge for a material structural limitation of the claims has no evidentiary support, instead using impermissible hindsight to justify its conclusion of obviousness. *See KSR*, 550 U.S. at 421 (the requirement of an articulated reasoning is critical to avoiding “hindsight bias and . . . arguments reliant on *ex post* reasoning”). The Board undoubtedly fell “into the understandable but improper trap of constructing a selective version of the facts... so as to confirm [a] hunch that the asserted claims were obvious.” *In re Cyclobenzaprine*, 676 F.3d at 1080. The Board’s conclusion that this limitation is obvious over *Kato* alone is without rational underpinnings and should be overturned.

**G. The Seventh Amendment Provides Patent Owners with a Right to a Jury in Invalidity Proceedings**

The Seventh Amendment ensures a jury trial “[i]n Suits at common law.” U.S. CONST., amend. VII. The *inter partes* review process, therefore, improperly takes a patent validity claim out of the jury’s hands and entrusts it to bureaucrats. This Court has justified agency revocation of patents in this manner by holding that patent rights are mere “public rights” falling outside

Seventh Amendment protection. *MCM Portfolio LLC v. Hewlett-Packard Co.*, 812 F.3d 1284, 1293 (Fed. Cir. 2015). However, the Supreme Court has held patents are a property right, complete with the most important characteristic of private ownership – the right of exclusion. *See U.S. v. Am. Bell Tel. Co.*, 128 U.S. 315, 370 (1888) (“[The subject of the patent] has been taken from the people, from the public, and made the private property of the patentee.”). The Supreme Court recently granted *certiorari* in *Oil States Energy Servs., LLC v. Greene’s Energy Group, LLC*, -- S. Ct. --, 2017 WL 2507340 (June 12, 2017) to address this very issue. For the reasons set forth in the Petition for a Writ of Certiorari in that action (No. 16-712), invalidation of a patent through *inter partes* review proceedings is unconstitutional, and the decision of the Board in this matter should be vacated. In the alternative, Graphic respectfully requests that this Court delay its ruling in this action pending the Supreme Court’s decision in *Oil States*.

## **CONCLUSION**

For the reasons set forth above, the Board's ruling that the challenged claims are unpatentable as obvious should be reversed. In the alternative, the Board should vacate the Board's ruling as unconstitutional or delay its ruling in this action pending the Supreme Court's decision in *Oil States* regarding the constitutionality of invalidation of a patent through *inter partes* review proceedings.

Dated: June 19, 2017

Respectfully submitted,

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## **CERTIFICATE OF FILING AND SERVICE**

I hereby certify that, on June 19, 2017, I electronically filed the foregoing Brief of Appellants with the Clerk of Court using the CM/ECF System, which will send notice of such filing to all registered users.

I further certify that, upon acceptance and request from the Court, the required paper copies of the foregoing will be deposited with United Parcel Service for delivery to the Clerk, UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT, 717 Madison Place, N.W., Washington, D.C. 20439.

Dated: June 19, 2017

/s/ Barry J. Herman

Barry J. Herman

*Counsel for Appellant*

*Graphic Packaging International, Inc.*

## **CERTIFICATE OF COMPLIANCE**

1. This brief complies with the type-volume limitation of Fed. Cir. R. 32(a) because:

this brief contains 13,952 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(f) and Fed. Cir. R. 32(b).

2. This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because:

this brief has been prepared in a proportionally spaced typeface using Microsoft Word in 14 point Times New Roman.

Dated: June 19, 2017

/s/ Barry J. Herman  
Barry J. Herman

*Counsel for Appellant*  
*Graphic Packaging International, Inc.*

# **ADDENDUM**

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**Exhibit:**

<b>A. Acknowledgment for Access to Protective Order Material .....</b>	<b>Appx7</b>
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Date: April 11, 2016

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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INLINE PACKAGING, LLC

Petitioner

v.

GRAPHIC PACKAGING INTERNATIONAL, INC.,

Patent Owner

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Case IPR2015-01609

Patent 8,872,078 B2

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**PROTECTIVE ORDER**



This standing protective order governs the treatment and filing of confidential information, including documents and testimony.

1. Confidential information shall be clearly marked “PROTECTIVE ORDER MATERIAL.”

2. Access to confidential information is limited to the following individuals who have executed the acknowledgment appended to this order as **Exhibit A**:

(A) Parties. Persons who are owners of a patent involved in the proceeding and other persons who are named parties to the proceeding.

(B) Party Representatives. Representatives of record for a party in the proceeding.

(C) Experts. Retained experts of a party in the proceeding who further certify in the Acknowledgement that they are not a competitor to any party, or a consultant for, or employed by, such a competitor with respect to the subject matter of the proceeding. In the alternative, execution of the Written Assurance entered as Exhibit A to the Protective Order (Doc. No. 47) in the pending litigation between the parties entitled *Graphic Packaging International, Inc. v. Inline Packaging, LLC*, C.A. No. 15-CV-3476 (ADM/LIB) will satisfy the requirement that a retained expert execute the Acknowledgement.

(D) In-house counsel. In-house counsel of a party.

(E) Other Employees of a Party. Employees, consultants or other persons performing work for a party, other than in-house counsel and in-house counsel's support staff, who sign the Acknowledgement shall be extended access to confidential information only upon agreement of the parties or by order of the Board upon a motion brought by the party seeking to disclose confidential information to that person. The party opposing disclosure to that person shall have the burden of proving that such person should be restricted from access to confidential information.

(F) The Office. Employees and representatives of the Office who have a need for access to the confidential information shall have such access without the requirement to sign an Acknowledgement. Such employees and representatives shall include the Director, members of the Board and their clerical staff, other support personnel, court reporters, and other persons acting on behalf of the Office.

(G) Support Personnel. Administrative assistants, clerical staff, court reporters and other support personnel of the foregoing persons who are reasonably necessary to assist those persons in the proceeding shall not be required to sign an Acknowledgement, but shall be informed of the terms and requirements of the Protective Order by the person they are supporting who receives confidential information.

3. Persons receiving confidential information shall use reasonable efforts to maintain the confidentiality of the information, including:

(A) Maintaining such information in a secure location to which persons not authorized to receive the information shall not have access;

(B) Otherwise using reasonable efforts to maintain the confidentiality of the information, which efforts shall be no less rigorous than those the recipient uses to maintain the confidentiality of information not received from the disclosing party;

(C) Ensuring that support personnel of the recipient who have access to the confidential information understand and abide by the obligation to maintain the confidentiality of information received that is designated as confidential; and

(D) Limiting the copying of confidential information to a reasonable number of copies needed for conduct of the proceeding and maintaining a record of the locations of such copies.

4. Persons receiving confidential information shall use the following procedures to maintain the confidentiality of the information:

(A) Documents and Information Filed With the Board.

(i) A party may file documents or information with the Board under seal, together with a non-confidential description of the nature of the

confidential information that is under seal and the reasons why the information is confidential and should not be made available to the public. The submission shall be treated as confidential and remain under seal, unless, upon motion of a party and after a hearing on the issue, or *sua sponte*, the Board determines that the documents or information do not to qualify for confidential treatment.

(ii) Where confidentiality is alleged as to some but not all of the information submitted to the Board, the submitting party shall file confidential and non-confidential versions of its submission, together with a Motion to Seal the confidential version setting forth the reasons why the information redacted from the non-confidential version is confidential and should not be made available to the public. The nonconfidential version of the submission shall clearly indicate the locations of information that has been redacted. The confidential version of the submission shall be filed under seal. The redacted information shall remain under seal unless, upon motion of a party and after a hearing on the issue, or *sua sponte*, the Board determines that some or all of the redacted information does not qualify for confidential treatment.

(B) Documents and Information Exchanged Among the Parties. Information designated as confidential that is disclosed to another party during discovery

or other proceedings before the Board shall be clearly marked as “PROTECTIVE ORDER MATERIAL” and shall be produced in a manner that maintains its confidentiality.

## **EXHIBIT A**

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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INLINE PACKAGING, LLC

Petitioner

v.

GRAPHIC PACKAGING INTERNATIONAL, INC.,

Patent Owner

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Case IPR2015-01609

Patent 8,872,078 B2

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**Acknowledgment for Access to Protective Order Material**

I \_\_\_\_\_, affirm that I have read the Protective Order; that I will abide by its terms; that I will use the confidential information only in connection with this proceeding and for no other purpose; that I will only allow access to support staff who are reasonably necessary to assist me in this proceeding; that prior to any disclosure to such support staff I informed or will inform them of the requirements of the Protective Order; that I am personally responsible for the requirements of the terms of the Protective Order and I agree to submit to the jurisdiction of the Office and the United States District Court for the Eastern District of Virginia for purposes of enforcing the terms of the Protective Order and providing remedies for its breach.

By: \_\_\_\_\_



UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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INLINE PACKAGING, LLC,  
Petitioner,

v.

GRAPHIC PACKAGING INTERNATIONAL, INC.,  
Patent Owner.

---

Case IPR2015-01609  
Patent 8,872,078 B2

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Before MICHAEL W. KIM, CARL M. DEFRANCO, and  
JAMES J. MAYBERRY, *Administrative Patent Judges*.

DECISION

*Patent Owner's Motions to Seal*  
37 C.F.R. §§ 42.5, 42.14, 42.54

On April 11, 2016, Patent Owner filed a Motion for Entry of Protective Order and to Seal Under 37 C.F.R. § 42.54 of certain papers and exhibits. Paper 20; "Motion". A proposed Protective Order (Ex. 2047) was filed with the Motion, and Patent Owner represents that the Protective Order is the same as the Board's default protective order, with the exception that:

The sole modification to this default protective order that is reflected in the contemporaneously submitted proposed

protective order is a provision allowing execution of the Written Assurance entered as Exhibit A to the Protective Order (Doc. No. 47) in the pending litigation between the parties entitled *Graphic Packaging International, Inc. v. Inline Packaging, LLC*, C.A. No. 15-CV-3476 (ADM/LIB) to satisfy the requirement that a retained expert execute the Acknowledgement in paragraph 2(C) of the default protective order.

Motion 9–10. Patent Owner requests granting of the Motion because the portions of the papers and exhibits referenced in the Motion contain confidential information. Motion 2–3. Patent Owner has filed redacted versions of the certain papers (Paper 22) and exhibits (Exs. 2007, 2008) that are accessible to the public. Motion 3. Petitioner has not filed an opposition to the Motion, and based on Patent Owner’s certification that they conferred with Petitioner regarding the entry of the Protective Order in this proceeding (Motion 9–10), does not appear to oppose the Motion.

After consideration of the Motion and accompanying papers, we grant Patent Owner’s request, and the proposed Protective Order is entered for the referenced papers and exhibits. The parties are reminded that confidential information that is subject to a protective order ordinarily becomes public 45 days after final judgment in a trial. Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,761 (Aug. 14, 2012). There is an expectation that information will be made public where the existence of the information is identified in a final written decision following a trial. *Id.* After final judgment in a trial, a party may file a motion to expunge confidential information from the record prior to the information becoming public. *See* 37 C.F.R. § 42.56.

IPR2015-01609  
Patent 8,872,078 B2

It is

ORDERED that Patent Owner's Motion is *granted* and that the proposed Protective Order is placed into effect for the papers and exhibits referenced in the Motion.

IPR2015-01609  
Patent 8,872,078 B2

PETITIONER:  
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PATENT OWNER:  
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James F. Vaughan  
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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INLINE PACKAGING, LLC,  
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Case IPR2015-01609  
Patent 8,872,078 B2

---

Before MICHAEL W. KIM, CARL M. DEFRANCO, and  
JAMES J. MAYBERRY, *Administrative Patent Judges*.

KIM, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

## I. INTRODUCTION

### A. *Background*

Inline Packaging, LLC (“Petitioner”) filed a Petition (“Pet.”) for *inter partes* review of claims 1–53 of U.S. Patent No. 8,872,078 B2 (“the ’078 Patent”) (Ex. 1001) pursuant to 35 U.S.C. §§ 311–319. Paper 4. Graphic Packaging International, Inc. (“Patent Owner”) filed a Patent Owner Preliminary Response. Paper 8; “Prelim. Resp.”

On January 12, 2016, we instituted an *inter partes* review of claims 1–53 on certain grounds of unpatentability set forth in the Petition. (Paper 11; “Dec.”). After institution of trial, Patent Owner filed a Patent Owner Response (Paper 22, “PO Resp.”)<sup>1</sup> and Petitioner filed a Reply (Paper 28, “Pet. Reply”). Petitioner filed a Motion to Exclude. Paper 37; “Mot.” Patent Owner filed an Opposition to Petitioner’s Motion to Exclude. (Paper 39; “Mot. Opp.”). Petitioner filed a Reply in Support of its Motion to Exclude. Paper 44; “Mot. Reply”.

An oral hearing was held on September 29, 2016. Paper 50 (“Tr.”). The Board has jurisdiction under 35 U.S.C. § 6. In this Final Written Decision, issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73, we determine that Petitioner has shown by a preponderance of the evidence that all claims for which trial is instituted, claims 1–53 of the ’078 patent, are unpatentable. Petitioner’s Motion to Exclude is *denied*.

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<sup>1</sup> Patent Owner’s Motion to Seal (Paper 20) was granted in our Order of July 11, 2016 (Paper 31). Unless otherwise indicated, all references herein to the Patent Owner Response will be to the public version (Paper 22).

*B. The '078 Patent*

The '078 Patent relates to various blanks, constructs, and methods for heating, browning, and/or crisping a food item in a microwave oven.

Ex. 1001, 1:16–20. Specifically, the '078 Patent discloses that it meets two needs: (1) a need for a package or other construct that facilitates transportation and consumption of a food item therein; and (2) a need for such a package or other construct that enhances browning and crisping of a food item in a microwave oven. Ex. 1001, 1:25–30. An exemplary blank 400 is shown below in Figure 4A.

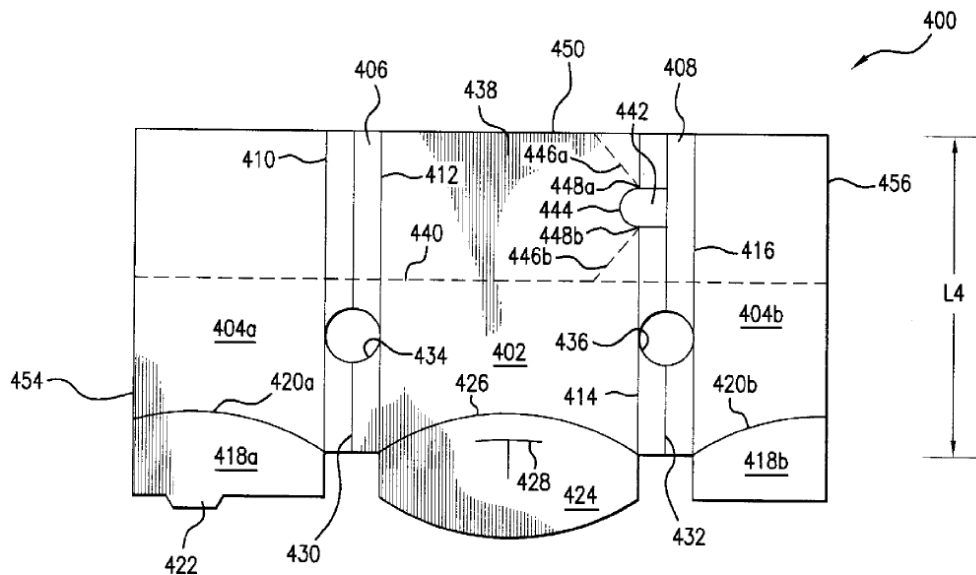


FIG. 4A

Figure 4A includes an illustration of exemplary blank 400. Blank 400 includes main panel 402, first major panel 404a, second major panel 404b, first minor panel 406, and second minor panel 408. Ex. 1001, 16:58–62. Blank 400 further includes, partial end panels 418a, 418b that are joined to first major panel 404a and second major panel 404b, respectively,

and partial end panel 418a may include locking feature 422. Ex. 1001, 17:1–4. Blank 400 also includes end panel 424 joined to main panel 402, which includes “somewhat T-shaped receiving slit 428” that is configured to receive locking feature 422. Ex. 1001, 17:4–11.

*C. Related Matters*

Petitioner and Patent Owner identify the following related district court proceedings between Petitioner and Patent Owner that involves the '078 Patent: *Graphic Packaging International, Inc. v. Inline Packaging, LLC*, Case No. 1:15-cv-01557-WSD (N.D. Ga.) (dismissed); *Graphic Packaging International, Inc. v. Inline Packaging, LLC*, Case No. 1:15-cv-00482-GMS/SLR (D. Del.). Pet. 59; Paper 5, 2.

*D. Illustrative Claim*

The '078 Patent includes claims 1–53, of which claims 1, 12, 20, 29, 34, 39, 42, and 47 are independent. Representative independent claim 1 is reproduced below:

1. A microwave heating construct, comprising:  
a first main panel and a second main panel opposite one another;  
a first minor panel and a second minor panel opposite one another;  
wherein  
the first minor panel and the second minor panel are joined to the first main panel and the second main panel so that the first main panel, second main panel, first minor panel, and second minor panel extend around and at least partially define an interior space of the construct,  
the first main panel, second main panel, first minor panel, and second minor panel each include an end edge



that at least partially defines an opening at a first end of the construct, and  
at least one of the first main panel, second main panel, first minor panel, and second minor panel comprise microwave energy interactive material;  
a first end panel joined to the first main panel along a first arcuate fold line, the first arcuate fold line being opposite the end edge of the first main panel, wherein the first end panel includes a cut positioned proximate to the first arcuate fold line;  
a second end panel joined to the second main panel along a second arcuate fold line, the second arcuate fold line being opposite the end edge of the second main panel; and  
a tab extending from an end edge of the second end panel, the end edge of the second end panel being opposite the second arcuate fold line, wherein the tab is for extending through the first end panel and engaging the cut in the first end panel to close a second end of the construct opposite the first end of the construct.

*E. Prior Art References Applied by Petitioner  
and Instituted Grounds of Unpatentability*

Petitioner challenges the patentability of claims 1–53 as obvious under 35 U.S.C. § 103(a) based on the following grounds and items of prior art (Pet. 20–56):

JP 2002-347756 (“Kato”)	Dec. 4, 2002	Ex. 1004 <sup>2</sup>
US 2004/0023000 (“Young”)	Feb. 5, 2004	Ex. 1006
US 2003/0206997 (“Winkelman”)	Nov. 6, 2003	Ex. 1007
US 4,948,932 (“Clough”)	Aug. 14, 1990	Ex. 1008
US 4,626,641 (“Brown”)	Dec. 2, 1986	Ex. 1009

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<sup>2</sup> Exhibit 1004 is a Japanese language document. An English-language translation has been provided by Petitioner as Exhibit 1005. Unless noted otherwise, all references to Kato will be to Exhibit 1005.

US 2004/0101605 (“Sigel”)

May 27, 2004

Ex. 1010

Petitioner also cites the Declaration of Dr. Claire Koelsch Sand (Ex. 1003; “Sand Decl.”) and the Reply Declaration of Dr. Claire Koelsch Sand (Ex. 1022; “Sand Reply Decl.”).<sup>3</sup> Patent Owner cites the Declaration of Dr. John Floros (Ex. 2007; “Floros Decl.”), the Declaration of Mr. Jeffrey Voyzey (Ex. 2008, “Voyzey Decl.”) and the Supplemental Declaration of Mr. Jeffrey Voyzey (Ex. 2049, “Voyzey Supp. Decl.”).

Reference(s)	Basis	Challenged Claims
Kato and Clough	§ 103(a)	1–4, 6–24, 26–29, 31–33
Kato, Clough, and Brown	§ 103(a)	5, 25, 30
Kato and Young	§ 103(a)	34, 35, 37–42, 44–49, 51–53
Kato, Young, and Brown	§ 103(a)	36, 43, 50
Kato and Winkelman	§ 103(a)	34, 35, 37–42, 44–49, 51–53
Sigel and Kato	§ 103(a)	1, 12, 20, 29, 34, 39, 42, and 47

## II. ANALYSIS

### A. Claim Construction

In an *inter partes* review, a claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent

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<sup>3</sup> Patent Owner filed an Amended Motion for Observations on cross of Dr. Claire Sand (Paper 41; “PO Obs.”). Petitioner filed a Response to Patent Owner’s Amended Observation (Paper 43; “Pet. Resp. Obs.”).

in which it appears. 37 C.F.R. § 42.100(b); *see also* *Cuozzo Speed Techs., LLC v. Lee*, 136 S.Ct. 2131, 2142 (2016) (Affirming that USPTO has statutory authority to construe claims according to 37 C.F.R. § 42.100(b)). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). For the purposes of this Decision we determine that only the following claim terms need express interpretation. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”).

*“wherein the cut in the first end panel is  
substantially T-shaped”*

Dependent claims 4, 24, 36, and 49 each recite “wherein the cut [in] the first end panel is substantially T-shaped.” Dependent claims 30 and 43 recite substantially the same, with “slit” instead of “cut.” In the Patent Owner Preliminary Response, the Patent Owner asserted that the aforementioned claim limitation should be construed as “having a shape that closely resembles the capital letter ‘T’.” Prelim. Resp. 6–7 (citing Ex. 1001, 17:8–11). In the Decision on Institution, we agreed, although we clarified that we do not discern that the proposed construction provides any additional substantive clarity relative to the plain language. Dec. 7–8. After the Decision on Institution, while Patent Owner and Petitioner disagree with the application of the aforementioned claim construction, as set forth below, neither Patent Owner nor Petitioner has expressed disagreement with the

construction itself. After considering anew the basis for our previous construction, we see no need for modification.

*B. Level of Ordinary Skill in the Art*

“Section 103(a) forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 405 (2007).

Petitioner proffers that a hypothetical person of ordinary skill in the art, with respect to and at the time of the ’078 patent, would have been a packaging professional with at least an undergraduate degree in packaging science (or related field) or comparable training/experience and would have had at least three (3) years of professional experience in the design of packaging materials for consumer products that are made from paperboard. Pet. 5. Patent Owner did not offer a skill level in the Patent Owner Response.<sup>4</sup>

Based on our review of the overall record, including the ’078 patent, we concur with the Petitioners’ assessment of the level of ordinary skill in the art and apply it for purposes of this Decision.

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<sup>4</sup> In the Preliminary Response, the Patent Owner proffers that “[a] person of ordinary skill in the art of the ’078 patent at the time of the invention would have at least three (3) years of experience designing paperboard constructs for consumer products,” which we discern is essentially the same level of skill advocated for by Petitioner. Prelim. Resp. 9.

*C. The Parties' Post-Institution Arguments*

In our Decision on Institution, we concluded that the arguments and evidence advanced by Petitioner demonstrated a reasonable likelihood that various selections of claims 1–53 were unpatentable as obvious based on Kato and other secondary references. Dec. 32–33. We must now determine whether Petitioner has established by a preponderance of the evidence that the specified claims are unpatentable over the cited prior art. 35 U.S.C. § 316(e). In this connection, we previously instructed Patent Owner that “any arguments for patentability not raised in the [Patent Owner Response] will be deemed waived.” Paper 12, 3; *see also* 37 C.F.R. § 42.23(a) (“Any material fact not specifically denied may be considered admitted.”). Additionally, the Board’s Trial Practice Guide states that the Patent Owner Response “should identify all the involved claims that are believed to be patentable and state the basis for that belief.” Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012).

In connection with the arguments and evidence advanced by Petitioner to support its positions that Patent Owner chose not to address in its Patent Owner Response, the record now contains unrebutted arguments and evidence presented by Petitioner regarding the manner in which the asserted prior art teaches all other elements of the claims against which that prior art is asserted. Based on the preponderance of the evidence before us, we conclude that the prior art identified by Petitioner describes all limitations of the reviewed claims, in view of our analysis of those that Patent Owner contested in the Patent Owner Response, which we address below.

*D. Claims 1–4, 6–24, 26–29, and 31–33 as  
Unpatentable Over Kato and Clough*

Petitioner contends that claims 1–4, 6–24, 26–29, and 31–33 are unpatentable over a combination of Kato and Clough. Pet. 9–29, 50–57 (citing Exs. 1001, 1003, 1005, 1007, 1008, 1010, 1018). Patent Owner disagrees. PO Resp. 18–60 (citing Exs. 1001, 1003, 1007, 1008, 1010, 2001, 2007, 2021, 2028–2031). Petitioner replies. Pet. Reply 1–25 (citing Exs. 1001, 1003, 1007, 1008, 1016, 1022–1027, 2007, 2008, 2015, 2022, 2031, 2033). Claims 1, 12, 20, and 29 are independent.

*1. Kato (Ex. 1005)*

Kato relates to a personal meal container for bulky food for containing a single item of bulky food that is edible as is, such as hamburger or croquette. Ex. 1005 ¶ 1. Figure 3 of Kato is set forth below.

FIG. 3

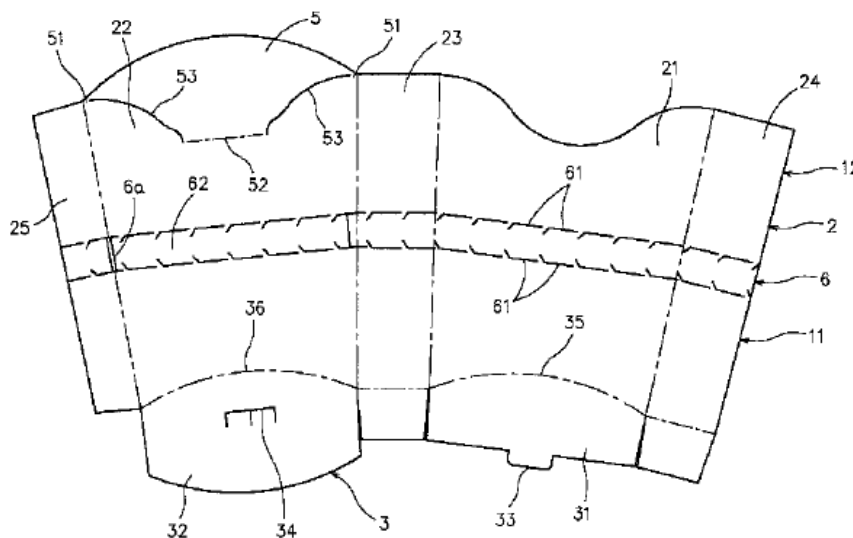


Figure 3 is a material expansion plan of a personal meal container. Kato includes box-shaped container body 1 including front wall 21, rear wall 22, left sidewall 23, and right sidewall 24. Ex. 1005 ¶ 12. Sticking wall 25

is to be adhered to right sidewall 24. Ex. 1005 ¶ 12. Box-shaped container body 1 further includes overlapping bottom pieces 31 and 32. Ex. 1005 ¶ 13.

2. *Clough (Ex. 1008)*

Clough relates to a disposable microwave reactive cooking, crisping, and browning package for foods that produces a thermal heating effect when exposed to microwave energy. Ex. 1008, 1:9–12.

3. *Petitioner's Positions*

Petitioner asserts that claims 1–3, 6–23, 26–29, and 31–33 are unpatentable over a combination of Kato and Clough. Pet. 6–57. For example, independent claim 1 recites a first main panel and a second main panel. Kato discloses front wall 21 and rear wall 22. Ex. 1005 ¶ 12. Independent claim 1 further recites a first minor panel and a second minor panel. Kato discloses left sidewall 23 and right sidewall 24. Ex. 1005 ¶ 12. Independent claim 1 recites also a first end panel and a second end panel, with a tab on the second end panel for engaging a cut in the first end panel. Kato discloses overlapping bottom pieces 31 and 32, with inserting piece 33 configured to be inserted into slit-state score 34. Ex. 1005 ¶ 13. Independent claim 1 recites additionally that “at least one of the first main panel, second mail panel, first minor panel, and second minor panel comprise microwave energy interactive material.” Clough discloses that “sleeve 10 is provided with a layer of microwave interactive material 16 which, when subjected to microwave energy, will operate to convert the microwave energy to heat in an amount sufficient to brown or crisp food surfaces that are in contact with or in close proximity to the microwave

interactive layer.” Ex. 1008, 3:10–16. For the rationale for modifying Kato in view of Clough, Petitioner asserts the following:

To the extent that Kato does not alone disclose microwave energy interactive material, adding microwave interactive material to Kato would have been obvious to a [person having ordinary skill in the art (POSA)] in view of at least *Clough* which teaches extensive usage of microwave energy interactive material since at least the 1980’s. Ex. 1008, 1:48–68, 2:1–3, 18–31, 3:10–19, 63–68, 4:1–9, 28–37; *See also* Ex. 1003, Sand Decl., ¶¶ 116–120. *Clough* discloses the usage of a “microwave interactive materials” within a four paneled sleeve that converts microwave energy from a microwave oven to heat for browning and crisping a food product. Ex. 1008, 1:48–68, 2:1–3, 18–31, 3:10–19, 63–68, 4:1–9, 28–37. The sleeve panels of *Clough* are disposed in a manner substantially identical to those features as configured in embodiments in the ‘078 Patent. *Id.*, Figs. 1–3; Ex. 1003, Sand Decl., ¶ 89. *Clough* discloses that “[t]he inner peripheral surface of the sleeve 10 is provided with a layer of a microwave interactive material 16 which, when subjected to microwave energy, will operate to convert the microwave energy to heat in an amount sufficient to brown or crisp food surfaces that are in contact with or in close proximity to the microwave interactive layer.” Ex. 1008, 3:10–16.

There is ample motivation to combine these related prior art disclosures. Kato and Clough are in the same field of paperboard sleeves for heated food products. Ex. 1005, ¶ 0011; Ex. 1008, 3:16–19. Moreover, a POSA would have been motivated to combine the disclosures of these references at the priority date because of the well-known desirability of using microwave interactive material in paperboard sleeves for browning and crisping food – a desirability that was both known generally to those in the field at the time, and explicitly disclosed in *Clough*. Ex. 1008, 1:15–68; Ex. 1003, Sand Decl., ¶ 118. A POSA who wanted to use *Kato* to heat food in a microwave would be motivated to look at general knowledge in the art and



to the microwave interactive material of *Clough*. *Id.* at ¶¶ 116–120.

Pet. 14–16.

Petitioner sets forth similar analyses for claims 1–3, 6–23, 26–29, and 31–33. Pet. 9–29, 50–51, 53–56.

4. *Rationale to Modify Kato in view of Clough to Meet the Limitations of Independent Claims 1, 12, 20, and 29*

The '078 Patent discloses that it meets two needs: (1) a need for a package or other construct that facilitates transportation and consumption of a food item therein; and (2) a need for such a package or other construct that enhances browning and crisping of a food item in a microwave oven. Ex. 1001, 1:25–30. Neither party disputes that need (2) is met by the limitation of “microwave energy interactive material” recited in each of independent claims 1, 12, 20, and 29, and neither party disputes that need (1) is met by the rest of the limitations of those same claims. *See generally* Pet. 9–29; PO Resp. 12–15, 18–22, 32–39. Neither party disputes further that Kato meets all of the claim limitations corresponding to need (1), except for those limitations of independent claims 20 and 29 identified below. *See generally* Pet. 9–29; PO Resp. 12–15, 18–22, 32–39.

Where the ultimate disagreement lies is Patent Owner’s assertion that one of ordinary skill would not have modified Kato, which meets need (1), to include the microwave energy interactive material of Clough, so as to also meet need (2), because Kato is only directed to a container for holding an already-prepared (i.e., ready-to-eat) food item, and does not mention anything about a microwave browning and crisping package. PO Resp. 35–36 (citing Exs. 1003, 2001, 2007). While Patent Owner’s assertions will be assessed in more detail below, fundamentally, Patent Owner’s assertions are

misplaced as Clough, and not Kato, is cited for being directed to a microwave browning and crisping package. Pet. 14–16 (citing Exs. 1003, 1008). We agree with Petitioner that one skilled in the art would have recognized that Kato’s paperboard sleeve would have been used to microwave food therein and, thus, that one skilled in the art would have had ample reason to modify and improve Kato’s paperboard sleeve to brown and crisp food using Clough’s known technique of adding microwave interactive material to a sleeve to realize the advantages set forth in Clough. Pet. 14–16 (citing Ex. 1003 ¶¶ 106–114, 116–120; Ex. 1008).

Primarily, Patent Owner’s assertions are flawed because they are almost uniformly directed to Kato alone. Essentially, Patent Owner is asserting that one of ordinary skill, when reading Kato, would discern that Kato is a perfect product for its stated purpose, that the stated purpose can never change or be added to, and, thus, that one of ordinary skill would never look outside the narrow confines of Kato for any modifications, no matter what improvements and advantages such modifications may bring. Such assertions are contrary to almost every doctrine of obviousness under *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007). For example, *KSR* states “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton.” *KSR* at 421. Patent Owner’s inflexible approach to Kato is more akin to that of an automaton, than to one of ordinary creativity. Furthermore, *KSR* explains explicitly that the ordinary artisan recognizes “that familiar items may have obvious uses **beyond their primary purposes**, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *KSR* at 420 (emphasis added). No one disputes that Kato’s primary stated

purpose aligns with need (1), i.e., a container for holding an already-prepared (i.e., ready-to-eat) food item. We are unpersuaded, however, that this primary stated purpose of Kato should be held in such high esteem so as to exclude all other purposes known in the art, such as need (2), especially when *KSR* counsels that “uses beyond their primary purposes” must be considered.

To that end, the record is replete with evidence concerning the advantages of modifying a paperboard sleeve, including that of Kato, with the microwave energy interactive material of Clough in order to brown and crisp food, so as to meet need (2). *See, e.g.*, Ex. 1008, 1:48–68, 2:1–3, 18–31, 3:10–19, 63–68, 4:1–9, 28–37; Ex. 1003 ¶¶ 116–120. Patent Owner would have us believe that such a purpose is irreconcilably in conflict with Kato’s stated purpose. We disagree. As a matter of logic, Kato must be made of some type of material, and we are persuaded that Clough provides sufficient objective evidentiary support for the notion that one of ordinary skill would have had reason to include in the paperboard sleeve of Kato the microwave energy interactive material of Clough in order to brown and crisp food.

Relatedly, Patent Owner would have us believe that a modification not contemplated in a reference is a modification that cannot be made. We are unaware of any case in patent law that supports this proposition. If a reference expressly contemplates a modification, it is already an anticipatory reference, and no further reference is necessary. Taking Patent Owner’s doctrine to its logical conclusion, no modification not stated in a reference would ever be possible, effectively eviscerating obviousness.

As an example, assume the claimed invention is to a black coat, and also assume that reference A discloses a coat that is colored white in order to reflect heat, and that reference B discloses clothing can be colored black in order to absorb heat. Under Patent Owner's logic, one of ordinary skill would never modify the coat of reference A to be black so as to absorb heat, in view of reference B, because reference A does not disclose either the color or the need to absorb heat. Such a rubric is not credible.

Instead, we discern that one of ordinary skill, based on these disclosures in reference A and B, would know that a coat can be either black or white, depending on the desired purpose, and that the coat in reference A can readily be modified to be black if absorbing heat is desired, even if reference A does not mention anything about the color black or absorbing heat. Furthermore, if reference A were to instead read "but the coat can alternatively be black to absorb heat," reference A would not require any modification, but would instead anticipate, because although reference A may primarily disclose a white coat embodiment, it now also discloses expressly a black coat embodiment.

To be sure, we acknowledge readily that every modification has advantages and disadvantages, which must be weighed appropriately in an obviousness analysis. To that end, the one disadvantage identified by Patent Owner, with respect to modifying Kato to include need (2), is that a paperboard sleeve including microwave energy interactive material would be too hot to hold immediately after the package and food item therein has been microwaved. We agree that is a disadvantage. The question then becomes, however, whether that disadvantage so outweighs the browning and crisping advantages to counsel sufficiently against modifying Kato with

Clough in the manner asserted. We determine that it does not. As a practical matter, we discern that one of ordinary skill, and indeed even an average consumer, when faced with this disadvantage, would have counseled against holding the paperboard sleeve immediately after the food item therein has been microwaved.

Patent Owner recites further disadvantages for modifying Clough, Young, and Winkelman to meet need (1), such as unsanitary hands and spillage of sauces through apertures. PO Resp. 38 (citing Ex. 2001). Those arguments are misplaced, as the modification for this ground is with respect to Kato in view of Clough. Moreover, even if the modifications were to Clough, Young, and Winkelman, we are unpersuaded that those purported disadvantages would be of such a character that they would sufficiently outweigh modifying each of those references so as to meet need (1). Indeed, in the case of Winkelman, no modification would even be necessary, as Winkelman already discloses expressly that it meets needs (1) and (2) simultaneously.

More specifically, Winkelman, identified explicitly by Dr. Sands, teaches expressly and unequivocally the contemporaneous need, at the time of the invention, for heating food with a microwave interactive material and also holding the food during transportation and consumption using the same container. Ex. 1022 ¶ 13 (citing Ex. 1007 ¶¶ 2–9, 12, 14, 41). For instance, Winkelman discloses that its “invention is directed to a container for heating a food product and for optionally holding the food product during its consumption. . . . The interior of the envelope has a susceptor surface to facilitate optional heating.” Ex. 1007 ¶ 9.

At oral argument, Patent Owner asserted, essentially, that Winkelman does not meet need (1), because Winkelman later discloses that the food product is actually taken out of the sleeve for consumption. Tr. 58:19–60:2. Patent Owner’s assertions are inapposite, as while the referenced embodiment may have been meant to be used in that manner, Winkelman unequivocally uses the words “a container . . . for optionally holding the food product during consumption” (Ex. 1007 ¶ 9), which we cannot read as being anything other than identical to need (1). While certainly not dispositive with respect to this ground, in that Winkelman was not cited expressly for this ground of unpatentability, it nevertheless is objective evidence as to what one of ordinary skill knew at the time of the invention, and merely provides additional support for Petitioner’s rationale as to why one of ordinary skill would have modified the handheld sleeve of Kato to include Clough’s microwave energy interactive material. *See Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1365 (Fed. Cir. 2015) (citing *Randall Mfg. v. Rea*, 733 F.3d 1355, 1362–63 (Fed. Cir. 2013)) (“Art can legitimately serve to document the knowledge that skilled artisans would bring to bear in reading the prior art identified as producing obviousness.”); *Randall Mfg. v. Rea*, 733 F.3d at 1356 (“[T]he Board failed to consider a wealth of well-documented knowledge that is highly material to evaluating the motivation to combine references.”). Accordingly, we find explicitly and unequivocally that it was widely and well-known, at the time of the claimed invention, to add microwave energy interactive material to a paperboard sleeve in order to brown and crisp food.

Patent Owner asserts further that “Petitioner’s analysis is based entirely on sweeping generalizations, conclusory statements, and the

impermissible use of hindsight, using the '078 Patent claims as a roadmap for reconstructing the claimed microwave heating constructs and blanks.” PO Resp. 19. We disagree, as Petitioner’s express claim mapping is set forth in their claim charts, and Petitioner’s rationale for modifying the handheld sleeve of Kato to include Clough’s microwave energy interactive material is supported expressly by the above citations to Clough. *See* Pet. 9–29.

Patent Owner asserts relatedly that in order to properly effect the microwave energy interactive material of Clough in the handheld sleeve of Kato, the apertures of Clough would also need to have been placed in Kato, and that the result of those apertures would have been the unsanitary hands and spillage of sauces disadvantages referenced above. As an initial matter, we are unpersuaded that modifying the handheld sleeve of Kato with the microwave energy interactive material of Clough also requires importing the apertures of Clough into Kato. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference . . . . Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art.”). Moreover, even if such a modification were required, we are unpersuaded that one of ordinary skill would not have been able to account sufficiently for the apertures so as to meet both needs (1) and (2). For example, Dr. Sands asserts, and we agree, that apertures could be moved or sized to prevent sauces from dirtying hands, such as in Winkelman. Ex. 1022 ¶ 31.

Patent Owner makes additional assertions concerning the differences between Kato and Clough, such as the number of sides, whether there are

end panels, and the locations of disruption lines. PO Resp. 37–38 (citing Exs. 1003, 1007, 1008, 2001, 2007, 2031). They have been considered, but are inapposite, in that Petitioner is only advocating for modifying Kato to include one feature of Clough: the microwave energy interactive material.

Patent Owner asserts additionally that “Petitioner’s analysis is also critically deficient because the Petition vastly oversimplifies the ’078 Patent claims and impermissibly analyzes individual features of the claimed microwave heating constructs and blanks in isolation.” PO Resp. 21. We disagree. Aside from microwave energy interactive material and the claim limitations of independent claims 20 and 29 addressed below, Patent Owner does not identify any other specific claim limitation in any of the independent claims that is missing from Kato. If no limitation is missing, we are unpersuaded that an analysis of individual features largely from one reference, Kato, is an oversimplification of the independent claims as a whole.

Patent Owner cites to the Declaration of Dr. Floros to support many of its assertions set forth above, in particular, that Kato does not provide any indication that it would have been modified to include the microwave energy interactive material of Clough. *See* Ex. 2007, 28–38, 40–44. Dr. Floros’ testimony is unpersuasive for the same reasons as set forth above, and need not be repeated here.

5. *Independent Claims 20 and 29 –  
Substantially Equal Side Edges of End Panels*

Independent claims 20 and 29 each recite “wherein the side edges of the first end panel and the side edges of the second end panel are substantially equal in length with respect to one another.” Petitioner argues



that Kato both (1) anticipates and (2) renders obvious the limitation at issue. Pet. 23 (citing Exs. 1003, 1005).

Patent Owner argues that that Kato does not anticipate, because the end panels of *Kato* do not have side edges that are substantially equal in length. PO Resp. 32–34 (citing Ex. 2001, FIG. 3 (annotated)); Ex. 2007 ¶ 57). Kato Figure 3, annotated by Patent Owner is shown below:

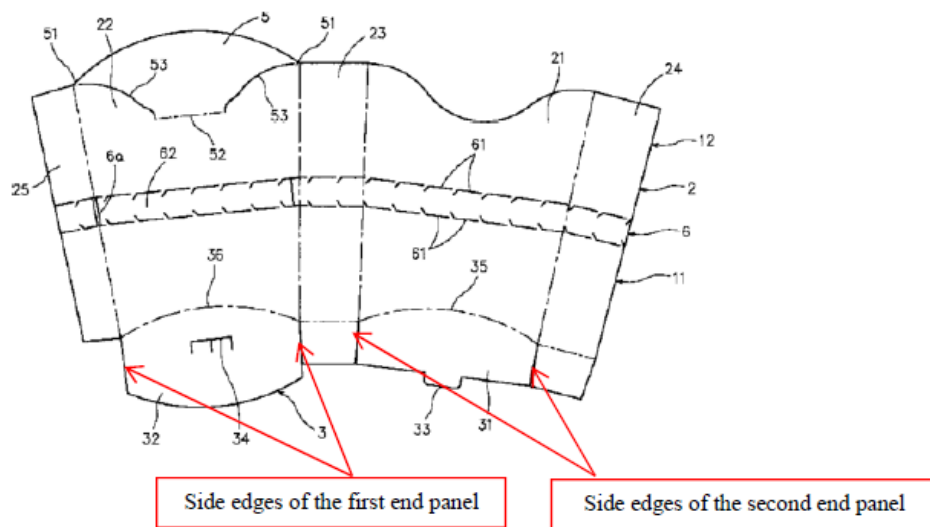


Figure 3 of Kato is a material expansion plan of a personal meal container, and has been annotated by Patent Owner.

PO Resp. 33 (citing Ex. 2001, Fig. 3).

Patent Owner’s assertions are flawed, for even if we were to agree that Kato does not disclose the aforementioned claim limitations, Patent Owner does not present any arguments against Petitioner’s obviousness assertions. *See* PO Resp. 32–34. To that end, we have considered, and are persuaded by, Petitioner’s assertion that:

*Kato* discloses that “dimensions of the container body 1 are designed by matching a croquette, which has common size as the bulky food F, and needless to say, the design can be changed according to the types and size of the bulky food F.” Ex. 1005,

¶ 0014; *See also Id.* at ¶¶ 0007, 0011. Based on these teachings, it would have been obvious to a POSA to make the edges equal in length to increase the swelling of the opposing main panels to accommodate a thicker food product. Ex. 1003, Sand Decl., [¶¶] 137, 200, 236.

Pet. 23; *see also* Pet. Reply 12–14. After considering Petitioner’s and Patent Owner’s positions, as well as their supporting evidence, we are persuaded that Petitioner has shown sufficiently that the aforementioned limitations of claims 20 and 29 are at least suggested by Kato.

6. *Dependent Claims 4 and 24 – “cut . . . is substantially T-shaped”*

Each of dependent claims 4 and 24 recite “wherein the cut [in] the first end panel is substantially T-shaped.” Petitioner identifies slit-state score 34 depicted in Kato’s Figure 3, reproduced below, as corresponding to the aforementioned claim limitation. Pet. 51.

FIG. 3

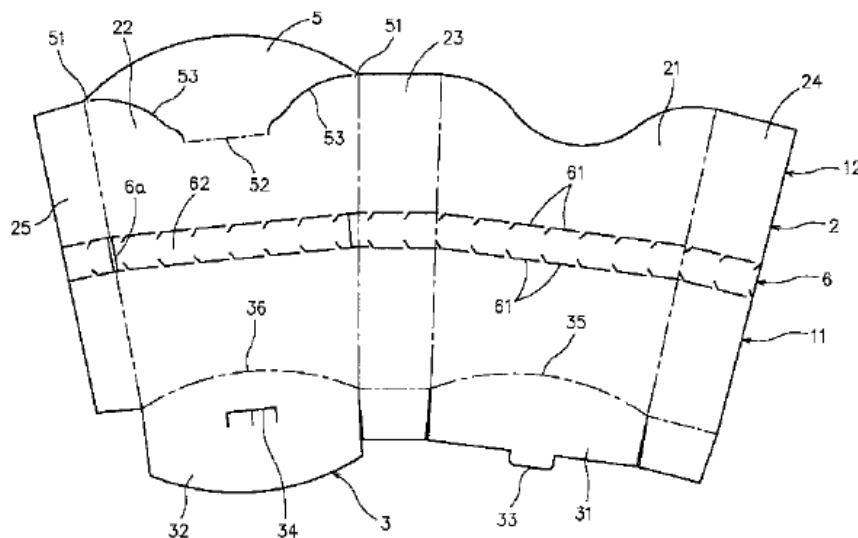


Figure 3 depicts a material expansion plan of a personal meal container. Patent Owner asserts the broadest reasonable interpretation of “substantially T-shaped” excludes Kato’s slit that “resembles a sideways capital letter ‘E’

(Ex. 2001, FIG. 3) and not a capital letter ‘T’.” PO Resp. 34. As set forth above, we construe the aforementioned claim limitation as “having a shape that closely resembles the capital letter ‘T’.”

In our Decision on Institution, we provided the following explanation:

We note, however, that the dependent claims 4 and 24 recite “wherein the cut in the first end panel is *substantially* T-shaped,” (emphasis added) and that independent claims from which each of dependent claims 4 and 34 depend ultimately recite the open-ended term “comprising.” To that end, we discern that there are several ways to get something substantially resembling a capital letter “T” from slit-score 34 of Kato. For example, if the outermost slits of the sideways capital letter “E” of slit-state score 34 of Kato are removed, we are left with something substantially resembling a capital letter “T.” In another example, extending the middle slit of slit-score 34 would result in something substantially resembling a capital letter “T.” In other words, Kato does disclose something substantially resembling a capital letter “T,” albeit within the confines of the sideways capital letter “E.”

Dec. 14. Patent Owner asserts that this application of the aforementioned claim construction is impermissibly broad, because “nearly any slit that incorporated cuts at right angles could be considered ‘substantially T-shaped,’ rendering this limitation meaningless.” PO Resp. 34. We disagree, and Patent Owner’s example actually perfectly illustrates why the claim limitation, as applied is not meaningless. Specifically, we do not discern that an “L” shaped slit, despite the fact that it has a right angle, would correspond properly to a “substantially T-shaped” cut.

Patent Owner asserts further the following:

The substantially T-shaped slit of the ’078 Patent is specifically designed to receive the trapezoidal tab that is also claimed in the ’078 Patent. Ex. 2007 ¶ 60. *Kato* has no such trapezoidal tab

and therefore need not have a slit that is “substantially T-shaped.” Instead, the tab of *Kato* is rectangular as is appropriate to be received by the E-shaped slit shown therein. *Id.*

PO Resp. 34; *see also* Ex. 2007 ¶ 23. Patent Owner’s assertions are misplaced, as we are unclear as to the relevance of tab shapes to our analysis set forth above. A slit has a particular shape, regardless of the shape of the corresponding tab, and we are unpersuaded that our analysis set forth above concerning the slit, and only the slit, is in error.

After considering Petitioner’s and Patent Owner’s positions, as well as their supporting evidence, we determine that, by a preponderance of the evidence, Petitioner has shown that the limitations of claims 4 and 24 are taught or suggested by *Kato*.

## 7. *Secondary Considerations*

### i. *Law – Objective Indicia of Nonobviousness*

Factual inquiries for an obviousness determination include secondary considerations based on objective evidence of non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Notwithstanding what the teachings of the prior art would have suggested to one of ordinary skill in the art at the time of the invention, the totality of the evidence submitted, including objective evidence of non-obviousness, may lead to a conclusion that the challenged claims would not have been obvious to one of ordinary skill in the art. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed.Cir.1984).

We note that it is not sufficient that a product or its use merely be within the scope of a claim in order for objective evidence of nonobviousness tied to that product to be given substantial weight. There must also be a causal relationship, termed a “nexus,” between the evidence and the claimed invention. *Merck & Co. v. Teva Pharm. USA, Inc.*, 395

F.3d 1364, 1376 (Fed. Cir. 2005). A nexus is required in order to establish that the evidence relied upon traces its basis to a novel element in the claim, not to something in the prior art. *Institut Pasteur & Universite Pierre Et Marie Curie v. Focarino*, 738 F.3d 1337, 1347 (Fed. Cir. 2013). Objective evidence that results from something that is not “both claimed and novel in the claim,” lacks a nexus to the merits of the invention. *In re Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011).

All types of objective evidence of nonobviousness must be shown to have nexus. *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995) (nexus generally); *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996) (commercial success); *Wm. Wrigley Jr. Co. v. Cadbury Adams USA LLC*, 683 F.3d 1356, 1364 (Fed. Cir. 2012) (copying); *Rambus Inc. v. Rea*, 731 F.3d 1248, 1256 (Fed. Cir. 2013) (long-felt need); *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1328 (Fed. Cir. 2008) (praise). The stronger the showing of nexus, the greater the weight accorded the objective evidence of nonobviousness. *See Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 306 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986). “Where the allegedly obvious patent claim is a combination of prior art elements, . . . the patent owner can show that it is the claimed combination as a whole that serves as a nexus for the objective evidence.” *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1330 (Fed. Cir. 2016) (citing *Rambus*, 731 F.3d at 1258). “[T]here is a presumption of nexus for objective considerations when the patentee shows that the asserted objective evidence is tied to a specific product and that product “is the invention disclosed and claimed in the patent.” *WBIP*, 829 F.3d at 1329. Secondary consideration evidence is accorded less weight for claims that are considerably broader than the

particular features in the merits of the claimed invention. *See ClassCo, Inc. v. Apple*, No. 2015-1853, slip op. at 12, --- F.3d ----, 2016 WL 5219886, at \*5 (Fed. Circ. Sept. 22, 2016).

*ii. Patent Owner Assertions Concerning  
Secondary Considerations*

Patent Owner asserts that even if all of the other factors weigh in favor of the obviousness of certain claims, that those factors are outweighed by Patent Owner's proffered evidence concerning objective indicia of non-obviousness, i.e., secondary considerations. PO Resp. 22–32 (citing Exs. 1001, 2007, 2008, 2026, 2028–30). Petitioner disagrees. Pet. Reply 18–25 (citing Exs. 1006, 1008, 1016, 1027, 2007, 2008, 2022, 2015).

*iii. Nexus*

Beginning with nexus, both Patent Owner and Petitioner effectively agree that in order to be considered to have a nexus with certain claims of the '078 patent, the evidence of secondary consideration must largely encompass three essential features: (1) a selectively closable end made of the end panels, (2) microwave interactive materials in the portable sleeve, and (3) the incorporation of an opening feature into the sleeve. PO Resp. 26 (citing Ex. 2008 ¶ 26). Regarding the third feature, Patent Owner asserts “the incorporation of an opening feature into the sleeve” is so that the sleeve can be easily opened for consumption by the user. PO Resp. 1, 24–27 (citing Ex. 2008 ¶¶ 15, 26, 28).

Petitioner asserts that all three features are set forth only in dependent claims 6, 14, 26, and 31. In particular, Petitioner asserts that the third feature, the opening feature, corresponds only to the “removable portion” recited in each of dependent claims 6, 14, 26, and 31. Pet. Reply 19;

Ex. 1001, Fig. 7A, 740. Patent Owner disagrees, asserting that “opening feature” is also set forth in certain language of independent claims 1, 12, 20, and 29, for example, the “opening” recited in independent claim 1.<sup>5</sup>

After evaluating both parties’ contentions, we discern that neither party credibly disputes that dependent claims 6, 14, 26, and 31 explicitly encompass all three sets of features. So, we determine that, at a minimum, Patent Owner’s assertions concerning secondary consideration have a nexus with, and, thus, are fully relevant to, at least dependent claims 6, 14, 26, and 31.

Furthermore, regardless of whether or not independent claims 1, 12, 20, and 29 encompass an “opening feature,” there can be no dispute that independent claims 1, 12, 20, and 29 are broader in scope than dependent claims 6, 14, 26, and 31. Accordingly, those independent claims have, at best, the same nexus as dependent claims 6, 14, 26, and 31. And as will be evident from our analysis below, it is unnecessary to determine further whether the nexus for those independent claims is commensurate with, or

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<sup>5</sup> Petitioner objected to Patent Owner’s characterizations as new arguments improperly introduced for the first time at oral argument. We acknowledge Petitioner’s objections, and in a vacuum may even be persuaded that they are correct, as the Patent Owner’s mapping on slide 70 is not set forth in any substantive paper. *See* PO Resp. 24–27, 31. Nevertheless, we determine the issue is moot, as we have found a nexus for dependent claim 6. Accordingly, even accepting Patent Owner’s position, independent claim 1, at best, would only have a nexus equivalent to dependent claim 6. Thus, as we evaluate the evidence of secondary considerations assuming there is nexus for at least one claim, it is irrelevant to our analysis whether it encompasses all claims.

lower than, the nexus for dependent claims 6, 14, 26, and 31. The same is true for the rest of dependent claims 2–4, 7–11, 13, 15–19, 21–24, 27, 28, and 32–33. *See ClassCo, Inc. v. Apple*, no. 2015-1853 slip op. at 12.

*iv. Commercial Success*

We next turn to evaluate the strength of Patent Owner’s evidence concerning commercial success. To that end, Patent Owner first asserts that Patent Owner, in 2005, designed an improved sleeve for “Hot Pocket” and “Lean Pocket” food items that corresponds substantially to Figure 7A, and by all accounts, appears to include all of the limitations set forth in dependent claim 6.<sup>6</sup> PO Resp. 25–27 (citing Ex. 1001, Fig. 7A; Ex. 2007 ¶¶ 69–72; Ex. 2008 ¶¶ 26–33; Exs. 2026, 2029–2030). We are persuaded that Patent Owner’s assertion is correct.

We then discern that Patent Owner is supporting their contentions of commercial success with three separate factual assertions: (1) that Patent Owner provided these improved sleeves to Nestlé at an increased price; (2) that Patent Owner provided these improved sleeves to Nestlé under an exclusive supply agreement for an inordinately long period of time, i.e., seven years, as opposed to the typical 1–3 years; and (3) that upon introduction of these improved sleeves, the volume of sales of Patent Owner’s sleeves to Nestlé increased dramatically. We evaluate the weight to be accorded each of these factual assertions in turn.

Concerning (1) increased price, Patent Owner provides paragraphs 30–32 of Mr. Voyzey’s Declaration and Exhibits 2026, 2027, and 2028 in

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<sup>6</sup> Going forward, unless noted otherwise, we choose dependent claim 6 as representative of dependent claims 6, 14, 26, and 31.



support of this assertion. We agree with Patent Owner that there is some supporting evidence to support its assertion. In particular, paragraph 31 Mr. Voyzey's Declaration asserts that Nestle agreed to an approximately \$0.36 increase per one thousand units of the improved sleeve provided, an assertion supported by the notation at the bottom of Exhibit 2027 of "4/16/07, Added \$0.36/M to HP, LP CP, Bismark & Pot Pie for Roxanne Cost Recovery," where "HP" is an abbreviation for "Hot Pocket" and "LP" is an abbreviation for "Lean Pocket." Furthermore, Exhibit 2028 chronicles an increase in "Price (\$/k) on Jan 1st" for "Nestle sleeve shipment & pricing" from \$19.68 in 2006 to \$20.31 in 2007 and \$20.99 in 2008, providing general support for the notion that there were increased prices based on the introduction of the improved sleeve in 2007. *See also* Ex. 2008 ¶ 30 ("Even though GPI's new design that was developed from Project Roxanne resulted in packaging that cost more than the current Hot Pockets® design that GPI was then providing to Nestlé, Nestlé nevertheless agreed to purchase the new design from GPI at this increased price.").

We also note, however, that the weight to be afforded this assertion is discounted heavily by many factors. First, the proponent in Ex. 2008, Jeffrey D. Voyzey, has been a Director of Business Development of Patent Owner since 2003. Accordingly, as an employee of an interested party, his testimony is discounted somewhat. *See Finnigan Corp. v. Int'l Trade Comm'n*, 180 F.3d 1354, 1369 (Fed. Cir. 1999) ("[T]he level of interest of the testifying witness is an important consideration when such testimony is offered to corroborate another witness's testimony.").

Next, paragraph 31 of Mr. Voyzey's Declaration asserts "[t]his increased cost was considered by GPI, and I believe by Nestle, as fair, given

the increased costs of production for the new sleeve.” We acknowledge that the implication that Nestle was willing to bear *any* increased price for the features of the improved sleeve supports Patent Owner’s assertion. Nevertheless, if at least *some* of the increased price was due to increased production costs, that somewhat undercuts Patent Owner’s assertion that the increased price was due to the features of the improved sleeve.

Additionally, we discern that while the “HP” and “LP” abbreviations in Exhibit 2027 stand for “Hot Pockets” and “Lean Pockets,” respectively, the above notation reads “4/16/07, Added \$0.36/M to HP, LP CP, *Bismark & Pot Pie* for Roxanne Cost Recovery” (emphasis added), indicating that the increased price was for many products in addition to the improved sleeve for “Hot Pockets” and “Lean Pockets,” for example, “Bismark” and “Pot Pie.”<sup>7</sup> Patent Owner does not provide any indication as to whether or not “Bismark” and “Pot Pie” are covered by dependent claim 6. Accordingly, if a price was uniformly increased for both products covered (“HP” and “LP”) and not covered (“Bismark” and “Pot Pie”) by dependent claim 6, that also undercuts somewhat Patent Owner’s assertion of that the increased price was due to the improved sleeve.

Finally, we note that there are many issues with regards to Exhibit 2028 that undercuts Patent Owner’s assertion. For example, since the improved sleeve was purportedly introduced sometime in 2007, the numbers for 2007 would presumably reflect some sales of both the former sleeve, as well as the improved sleeve covered by dependent claim 6. Yet, Patent

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<sup>7</sup> Patent Owner has not explained what “CP” stands for.

Owner has provided no explanation in that regard. Moreover, even if we assume that the entirety of the sleeves sold in 2007 were the improved sleeve, while the price increased \$0.63 between 2006 and 2007, the price increased \$0.68 between 2007 and 2008. Logically, if there was commercial success related to the improved sleeve, we would expect the increase between 2006 and 2007 to be higher than the increase between 2007 and 2008, absent some explanation, which was not provided by Patent Owner. Finally, Patent Owner has not explained whether the “Price (\$/k) on Jan 1st” is for the “Total Sleeves” or “Hot Pocket/Lean Pocket.” We discern that it is most likely that the figures are for the “Total Sleeves,” in which case the fact that the prices cover both the improved sleeve covered by dependent claim 6, as well as other sleeves, somewhat undercuts Patent Owner’s assertion concerning the increased price for the improved sleeve alone.

For these reasons, the weight to be accorded Patent Owner’s assertion’s concerning (1) increased price is discounted heavily.

Concerning (2) exclusive supply agreement for seven years, Patent Owner only provides, as supporting evidence, paragraph 33 of the Voyzey Declaration. As noted above, the testimony of Jeffrey D. Voyzey is discounted due to his relationship to Patent Owner. That, in conjunction with the lack of supporting documentary evidence for this assertion, for example, the supply agreement itself and other comparative supply agreements, undercuts heavily the weight to be accorded this assertion.

Concerning (3) increased sales, Patent Owner relies on paragraph 32 of the Voyzey Declaration and Exhibit 2028. Same as the above, the testimony of Jeffrey D. Voyzey is discounted due to his relationship to Patent Owner. Furthermore, for Exhibit 2028, we find that after hovering

around 700 million sleeves in sales, the introduction of the improved sleeve in 2007 resulted in a roughly 60 million unit increase in sales between 2006 and 2007, and a roughly 136 million unit increase in sales between 2007 and 2008. We agree that this supports Patent Owner's assertions that there were increased sales due to the improved sleeve.

Petitioner argues that Patent Owner's assertions concerning sales should be discounted, however, because Patent Owner did not control for the following other factors that could affect sales: expanding market; new supermarket retailers; product placement; changes to the food product; pricing; advertising; sales and promotion. Pet. Reply. 21. We agree that Patent Owner's assertions should be discounted somewhat for these reasons. In particular, information solely on numbers of units sold is generally insufficient to establish commercial success. *See In re Baxter Travenol Labs*, 952 F.2d 388, 392 (Fed. Cir. 1991); *see also In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 2012) (A patent owner must offer "proof that the sales [of the allegedly successful product] were a direct result of the unique characteristics of the claimed invention—as opposed to other economic and commercial factors unrelated to the quality of the patented subject matter.").

Patent Owner and the relevant portions of Mr. Voyzey's Declaration also cite Exhibits 2018–2026. Mr. Voyzey indicates that Exhibits 2018–2020 support the assertion that Patent Owner continued to provide sleeve concepts to Nestle under Project Roxanne. Ex. 2008 ¶ 16. We agree; however, we are unclear as to the relevance of this assertion with respect to Patent Owner's assertions of commercial success. We discern the same concerning Exhibits 2021–2025, which appear to be documentation of information exchanged between Patent Owner and Nestle, with unclear links

to Patent Owner's assertions of commercial success. *See* Ex. 2008 ¶¶ 19–23 (citing Exs. 2021–2025).<sup>8</sup>

Accordingly, when we consider the above factors in the aggregate, namely, that the improved sleeve is embodied by dependent claim 6, the heavily discounted assertion that the improved sleeve resulted in an increased price, the heavily discounted assertion that the improved sleeve resulted in an inordinately long exclusivity agreement, and the moderately discounted assertion that the improved sleeve increased sales, we find that Patent Owner has provided moderately weak evidence of commercial success for dependent claim 6 of the '078 patent.

v. *Failure of Others*

Patent Owner asserts Nestlé's rejection of three design concepts by Nestlé's outside consultant Mr. Robert Schiffman illustrates the failure of others. PO Resp. 30–31 (citing Ex. 2008 ¶¶ 20–23, 25–31). Petitioner responds that one person's alleged failure is insufficient to support the finding of the failure of *others*. Pet. Reply 24 (citing *Panduit Corp v. Dennison Mfg. Co.*, 774 F.2d 1082, 1099 (Fed. Cir. 1985) (*rev'd on other grounds*, *Dennison Mfg. Co. v. Panduit, Corp.*, 475 U.S. 809 (1986))).

We are persuaded by Petitioner's assertions. An allegation of failure of others is not sufficient evidence of nonobviousness, unless it is shown that **widespread** efforts of skilled workers having knowledge of the prior art had failed to find a solution to the problem. *In re Allen*, 324 F.2d 993, 997

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<sup>8</sup> At best, Exhibits 2018–2025 articulate a multi-year business relationship between Patent Owner and Nestlé, which is already reflected in, and does not add appreciably to, the fact that there were many years of sales from Patent Owner to Nestle.

(CCPA 1963). Here, because Patent Owner has only shown the failure of *one* person's design concepts, and not the failure of "widespread efforts of skilled workers," we find that there is not even evidence to find *any* failure of others, discounted or otherwise.

*vi. Long-Felt Need*

Establishing long-felt need requires objective evidence that an art-recognized problem existed in the art for a long period of time without solution. In particular, the evidence must show that the need was a persistent one that was recognized by those of ordinary skill in the art. *See In re Gershon*, 372 F.2d 535, 539 (CCPA 1967)) ("[I]t goes without saying that there could not possibly be any evidence of either a long-felt need . . . for a solution to a problem of dubious existence or failure of others skilled in the art who unsuccessfully attempted to solve a problem of which they were not aware."). This factor is similar to that set forth above for "failure of others."

To that end, Patent Owner asserts that Nestlé had been searching for a sleeve with the following attributes since June of 2001: "an improved Hot Pockets® package that would have cost advantages over the Hot Pockets® packaging then in use, would be portable (that is, could be carried by the user), would include an opening feature to allow easy food consumption from the package, and would contain grease and other fluids from the food product." PO Resp. 31 (citing Ex. 2008 ¶¶ 13–15, 18, 26, 31; Ex. 2021); Ex. 2008 ¶ 15. Patent Owner asserts further that the need was met "once Graphic developed the sleeves that embody the claims of the '078 Patent." PO Resp. 31–32 (citing Ex. 2007 ¶ 72; Ex. 2008 ¶¶ 25–33; Ex. 2026).

As an initial matter, Petitioner asserts that Patent Owner only identifies Nestlé's own needs, which were then communicated to Patent Owner, and that such needs identified by only Patent Owner are insufficient to support a finding of long-felt need. Pet. Reply 25. We agree. Generally, a need recognized by "others" is necessary to support a finding of long-felt need. *See In re Gershon*, 372 F.2d at 539 ("Since the alleged problem in this case was first recognized by appellants, and others apparently have not yet become aware of its existence, it goes without saying that there could not possibly be any evidence of . . . a long-felt need . . . .")

Additionally, Petitioner asserts that even if there was a recognition of need, that it was not "long-felt" because any alleged need was short-lived, in that a solution was found relatively quickly. Pet. Reply 25. We agree. Viewing the evidence in a light most charitable to Patent Owner, any alleged need was identified no earlier than May of 2001 (Exhibit 1015), which was only a little over four years prior to the latest alleged solution set forth in Provisional Patent Application No. 60/748,638, filed Dec. 8, 2005, from which the '078 Patent claims priority. Ex. 1001, 1:7–12. We are persuaded that four years is not "long-felt," especially where microwave packaging has been in existence for decades. *See, e.g.*, Ex. 1015 (U.S. Patent No. 4,190,757, entitled "Microwave Heating Package and Method," filed Jan. 19, 1978); Ex. 1019 (U.S. Patent No. 4,267,420, entitled "Packaged Food Item and Method for Achieving Microwave Browning Thereof," filed Oct. 12, 1978).

Moreover, we are unpersuaded that the evidence indicates long-felt need, because the evidence is unclear as to when any actual needs were identified, and even when those needs were identified, their solutions

followed very close in time. More specifically, Patent Owner asserts that paragraph 15 of the Voyzey Declaration supports the assertion that Patent Owner identified the following needs by June of 2001: “an improved Hot Pockets® package that would have cost advantages over the Hot Pockets® packaging then in use, would be portable (that is, could be carried by the user), would include an opening feature to allow easy food consumption from the package, and would contain grease and other fluids from the food product.” Ex. 2008 ¶ 15 (citing Ex. 2016<sup>9</sup>). As set forth above, we discount somewhat the weight of Mr. Voyzey’s testimony because he is an interested party. Furthermore, Mr. Voyzey’s testimony is inadequate, because it does not provide a sufficient analysis of how Exhibit 2016 supports the assertion that Patent Owner identified the aforementioned needs by June of 2001.

More specifically, Exhibit 2016 is an “Interoffice Memo” containing a text under various headings. Presumably the content of some of these texts are meant to support Patent Owner’s assertions. All Patent Owner has provided, however, are blanket citations to Exhibit 2016 with no further explanation. *See, e.g.*, Ex. 2008 ¶ 15 (“The specific goals of Project Quantum set by Chef America (as explained in the memo dated June 12, 2001 from Corey Brower of Chef America to GPC, including to me, Ex. 201[6]) included an improved Hot Pockets® package that would have cost advantages over the Hot Pockets® packaging then in use, would be portable (that is, could be carried by the user), would include an opening feature to

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<sup>9</sup> Paragraph 15 actually cites Exhibit 2017, however, it also indicates that the exhibit is a “memo dated June 12, 2001 from Corey Brower of Chef America to GPC.” Ex. 2008 ¶ 15. The only exhibit meeting that description is Exhibit 2016, and not Exhibit 2017.



allow easy food consumption from the package, and would contain grease and other fluids from the food product.”). It is not the Board’s burden to go foraging through Patent Owner’s Exhibits, without any guidance, in an attempt to cobble together bits and pieces from those Exhibits that may perhaps support Patent Owner’s conclusory assertion.

Moreover, even when we do delve somewhat into Exhibit 2016, the first problem we discern is that by use of language such as “[b]elow are concepts discussed during 6/11 meeting,” it appears to be directed to results rather than needs. This is problematic for Patent Owner, as a result usually represents the end of a need, and by itself does not indicate the duration of a particular need, i.e., whether it was “long-felt.” To that end, we do acknowledge that Exhibit 2016 does appear to disclose some needs. For example, Exhibit 2016 discloses “[i]ncorporate tear strip into pillow pack package to enable consumer ease of access to entire sandwich.” Ex. 2016, 1. To be sure, an identified “need” appears to be “enable consumer ease of access to entire sandwich,” however, that “need” also comes with a result of “[i]ncorporate tear strip into pillow pack package.” Accordingly, Exhibit 2016, by itself, does not provide us with any indication as to whether the identified need pre-dated or was contemporaneous with the identified result, the former of which is the minimum necessary to show that the need was “long felt,” and Patent Owner has not provided any further analysis otherwise.

Indeed, we find that the evidence as a whole does not actually support a finding that any alleged needs were identified without solutions until the document entitled “Evaluation of Alternative Sleeve Designs for Hot Pockets: Project Roxanne” (Ex. 2026) was prepared on December 22, 2005,

which is two weeks *after* the filing of the provisional patent application. We are unpersuaded that a finding of “long-felt need” can be made when the identified need, without solutions, was not identified until after the effective filing date of the invention.

To that end, Patent Owner may be asserting that there was a long-felt need for the improved sleeve embodied by dependent claim 6, even if the specifics of that need could not be articulated until after the product was developed. Restated, Patent Owner appears to be asserting that “you didn’t know you needed it until you had it, and now can’t live without it” is sufficient to support a finding of long-felt need. We are unpersuaded that such circular logic is credible, and are unable to ascertain any basis for this position in any of the case law presented in this proceeding. Indeed, the case law cited by Patent Owner actually stands for the opposite proposition. PO Resp. 30–31 (*citing Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1332–33 (Fed. Cir. 2009) (finding that a long-felt but unmet need arises when there is “an *articulated identified problem* and evidence of efforts to solve that problem”) (internal quotations omitted; emphasis added).) Here, the vast majority of evidence indicates that any efforts to solve the identified problem or need were contemporaneous with the articulation of the problem or need itself.

In any case, when we consider the contents of Exhibit 2026, the document has many of the same deficiencies as set forth above with regards to Exhibit 2016. Specifically, Exhibit 2026 is not analyzed adequately by Patent Owner. For example, concerning “cost advantages,” Patent Owner has not identified, and we are unable to discern independently, any language in Exhibit 2026 concerning “cost advantages.” *See e.g.*, Ex. 2026, 9 (the

page is entitled “[b]enefit language,” but the benefits identified do not refer to anything having to do with costs).

Furthermore, Exhibit 2026 largely appears to identify results, and does not explain how they indicate any needs met by those results were “long felt.” Indeed, the only two “needs” that Mr. Voyzey testifies are actually identified in Exhibit 2026 are “(1) ease of access based on difficulty tearing the tab and (2) difficulty keeping the bottom closed.” Ex. 2008 ¶ 29. Yet, even for those needs, “GPI determined that a simple adjustment to the perforations resolved issue #1, and the tab feature added to the end flaps of the Sleeve K design resolved issue #2,” indicating at best that the need was short-lived, and not “long felt.” Ex. 2008 ¶ 29.

Additionally, Exhibit 2026, at best, discloses a plethora of unprioritized “needs” allegedly met by an improved sleeve covered by dependent claim 6. Patent Owner has not explained sufficiently, however, and we are unable to ascertain independently, the significance of the subset of alleged “needs” identified above by Mr. Voyzey, as compared to the plethora of “needs” identified in Exhibit 2026.<sup>10</sup> Exhibits 2017 and 2021 suffer from many of the same deficiencies as set forth above with respect to Exhibits 2016 and 2026. We discern that, of all of these exhibits, Exhibit 2015, dated May 24, 2001, comes the closest to identifying “needs” prior to results. It too, however, suffers from a lack of analysis by Patent Owner, and does not adequately address “long felt,” especially in view of the fact

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<sup>10</sup> Paragraph 27 of Dr. Floros’ Declaration briefly analyzes Exhibit 2026, however, we do not discern that such analysis affects materially any of our determinations concerning Exhibit 2026 set forth herein.

that at least some of these needs would appear to have been met less than a month later on June 12, 2001 (Exhibit 2016).

In further support of its positions concerning long-felt need, Patent Owner cites paragraphs 13–15, 18, and 25–33 of Mr. Voyzey’s Declaration. We have considered those paragraphs, however, they largely mirror Patent Owner’s assertions set forth above and contain the same flaws.

Furthermore, paragraph 26 of Mr. Voyzey’s Declaration asserts that the design ultimately commercialized by Nestlé are shown in Exhibits 2029 and 2030. We agree that those Exhibits adequately support Mr. Voyzey’s assertion. Yet, they are inapposite in that we are unable to discern how they support Patent Owner’s positions concerning long-felt need.

For these reasons, we determine that there is insufficient evidence to support any finding that there was a long-felt need for the invention embodied in dependent claim 6.

*vii. Copying*

Patent Owner asserts that Petitioner copied Patent Owner’s product by copying Patent Owner’s drawings of the product sleeve. Specifically, Patent Owner asserts that Nestlé sent product specifications, including Patent Owner’s drawings of the improved sleeve, to Petitioner when searching for a secondary supplier. Patent Owner asserts that Petitioner then used Patent Owner’s drawings, which allegedly embodies the claims of the ’078 patent, to manufacture Petitioner’s sleeves. PO Resp. 27–30 (citing Ex. 2007 ¶¶ 69–70; Ex. 2008 ¶ 34; Exs. 2042–2046).

Petitioner does not dispute that Petitioner copied Patent Owner’s improved sleeve design that corresponds to dependent claim 6. Instead, Petitioner asserts that in order to be considered copying for the purposes of

secondary considerations, a party must copy the novel features from a patent and be aware of the patent to copy the novel features of the claimed invention. Pet. Reply 22–24 (citing *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc* 699 F.3d 1340, 1352 (Fed. Cir. 2012)). To that end, Petitioner asserts that it was not aware of the '078 Patent at the time it copied the improved sleeve design, but merely filled an order according to Nestlé's specifications, and that once it became aware of the '078 patent, successfully designed around the improved sleeve design. Pet. Reply 22–24.

We are unpersuaded by Petitioner's assertion. We have reviewed *Transocean*, and are unpersuaded that it requires a party to have knowledge of the patent, in order to be considered copying for the purposes of secondary considerations. Instead,

copying requires the replication of a specific product. This may be demonstrated through internal documents, by direct evidence such as disassembling a patented prototype, photographing its features, and using the photograph as a blueprint to build a virtually identical replica; or access to, and substantial similarity of the competing product to, the patented product (as opposed to the patent).

*Iron Grip Barbell Co. v. USA Sports Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004) (internal citations omitted). Here, as Petitioner undeniably copied Patent Owner's improved sleeve design, provided to Petitioner by Nestlé, that corresponds to dependent claim 6, we find that Petitioner copied the claimed invention, at least with respect to dependent claim 6 and independent claim 1 from which dependent claim 6 depends.

Having said that, we acknowledge that copying is given less weight when the manufacturer had not expended great effort to develop its own

solution. *See Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 318 (Fed. Cir. 1985). No argument has been made, nor evidence presented, that Petitioner expended great effort to develop its own solution. We, thus, discount moderately the weight accorded to Petitioner's copying in our analysis of secondary considerations.

For these reasons, we find that Patent Owner has provided some evidence of copying for dependent claim 6 of the '078 patent.

*viii. Overall Weighing of Relevant Factors Concerning Obviousness, Including Secondary Considerations*

We now weigh Patent Owner's evidence of secondary consideration in conjunction with the other factors relevant to obviousness for dependent claim 6.<sup>11</sup> In summary, we find, for the reasons set forth above, that the paperboard sleeve of Kato discloses all of the limitations of dependent claim 6, with the exception of microwave energy interactive material. For that, we find that it would have been well within the abilities and knowledge of one of ordinary skill in the art, at the time of the claimed invention, to modify the paperboard sleeve of Kato to include the microwave energy interactive material of Clough in order to brown and crisp food. We find further that Petitioner has identified overwhelming evidence, both in Clough and other prior art, such as Winkelman, that the modification itself, as well as the rationale for the modification, were widely and well-known to one of ordinary skill in the art, at the time of the invention. Against the above

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<sup>11</sup> For the purposes of expediency, we will focus our analysis only on dependent claim 6, with the understanding that all of claims 1–4, 7–24, 26–29, and 31–33 have a nexus with the evidence of secondary considerations equal to or less than that of dependent claim 6.

findings concerning Kato and Clough, we weigh the Patent Owner's evidence of secondary considerations, each of which we have analyzed above, and summarize as follows: (1) moderately weak evidence of commercial success; (2) no persuasive evidence of failure of others; (3) no persuasive evidence of long-felt need; and (4) some evidence of copying.

Overall, upon weighing the factors, we determine that the moderately weak evidence of commercial success and some evidence of copying is insufficient to outweigh our very strong finding that Kato, as modified by the on-point disclosures and rationales of Clough, accounts for every limitation of dependent claim 6. Furthermore, as dependent claim 6 represents the closest nexus between the evidence of secondary considerations and the claimed invention, we determine that a similar weighing for each of claims 1–4, 7–24, 26–29, and 31–33 results in the same conclusion.

For example, independent claims 20 and 29 each require the same additional modification to Kato that is different from those set forth above for dependent claim 6, and we acknowledge that the evidence supporting the additional modification is not as strong as that set forth above with respect to microwave energy interactive material. Patent Owner has not shown, however, and we are unable to ascertain independently, how the additional modifications set forth in independent claims 20 and 29 have any nexus to the evidence of secondary considerations closer than dependent claim 6. Accordingly, we determine that the lesser evidence in support of the additional modification is offset by a lesser nexus to the evidence of secondary considerations, resulting in the same conclusion that independent claims 20 and 29 are obvious over Kato and Clough for the reasons set forth

above, even when considered in conjunction with the evidence of secondary considerations.

Accordingly, for these reasons, we determine that claims 1–4, 6–24, 26–29, and 31–33 would have been obvious in view of the Kato and Clough, as discussed above.

#### 8. *Conclusion*

For the foregoing reasons, on this record, we are persuaded that Petitioner has shown, by a preponderance of the evidence, that claims 1–4, 6–24, 26–29, and 31–33 would have been obvious in view of Kato and Clough. In addition to findings we make above in connection with our analysis of claims 1–4, 6–24, 26–29, and 31–33 as obvious in view Kato and Clough, we also adopt as our findings, unless indicated otherwise, Petitioner’s positions as to how Kato and Clough discloses each of the limitations of claims 1–4, 6–24, 26–29, and 31–33. We further adopt as our own Petitioner’s rationales for modifying Kato in view of Clough, as referenced above.

#### *E. Claims 5, 25, and 30 as Unpatentable Over Kato, Clough, and Brown*

Petitioner contends that claims 5, 25, and 30 are unpatentable over a combination of Kato, Clough, and Brown. Pet. 51–52 (citing Exs. 1003, 1005, Ex. 1009). Patent Owner disagrees. PO Resp. 39–41 (citing Exs. 1009, Ex. 2007). Petitioner replies. Pet. Reply 11–12 (citing Exs. 1003, 1009, 1022, 2007).



1. *Brown (Ex. 1009)*

Brown relates to a container in which foods having crusts, such as fruit and meat pies, may be shipped, displayed, stored, cooked, and served. Ex. 1009, 1:7–11. Figure 2 of Brown is set forth below.

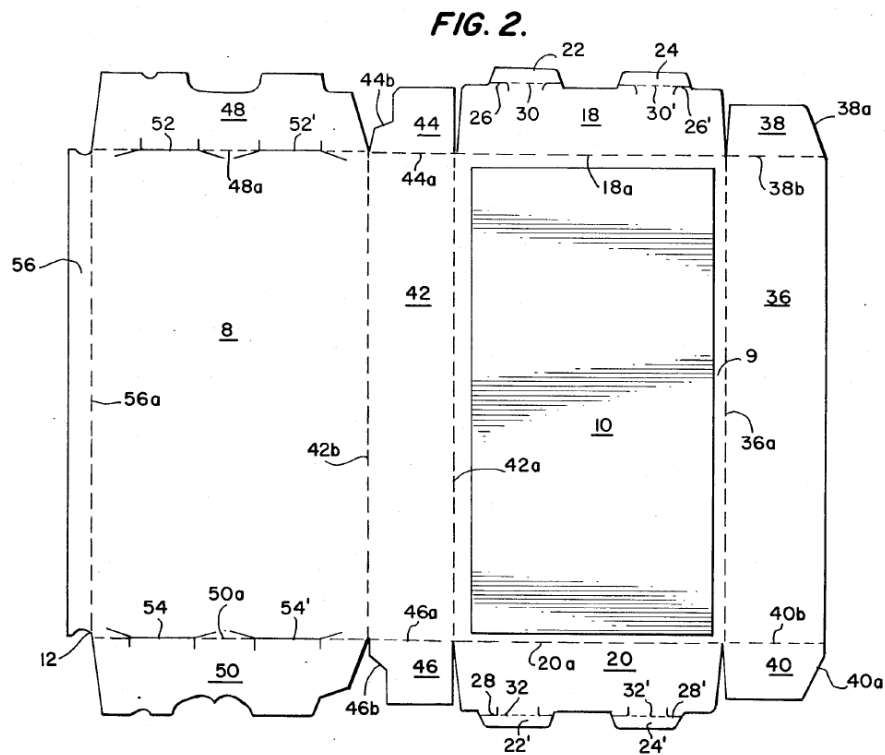


Figure 2 is a plan view of a paperboard blank.

2. *Dependent Claims 5 and 25 – Trapezoid Tab*

Dependent claim 5 recites “wherein the tab is substantially trapezoidal in shape.” Dependent claim 25 recites a similar limitation. Petitioner proposes modifying inserting piece 33 of Kato to be the shape of tabs 22, 24 of Brown “to facilitate easy insertion of the tab into the slit.” Pet. 52 (citing Ex. 1003 ¶¶ 226–229).

Patent Owner asserts that one of ordinary skill would not have modified Kato with features of the “more complex, multi-component system

for providing simultaneous one-sided browning and bulk heating” of Brown, because Kato is only directed to a hand held container for holding a prepared (i.e., ready-to-eat) food item. PO Resp. 40. Patent Owner’s assertions are unpersuasive for the same reasons as set forth above concerning similar assertions made with regards to the combination of Kato and Clough, and need not be repeated here.

Patent Owner asserts further that Petitioner has failed to provide a rationale underpinning for making the proffered modification, because the Petitioner does not indicate that inserting piece 33 of Kato is somehow deficient and in need of improvement. We disagree. As an initial matter, an obviousness analysis does not require an express realization in the reference to be modified that some disclosure therein is deficient in order to justify the modification. Again, as addressed above, such a framework would effectively eviscerate obviousness. Instead, all that is required is some articulated reasoning with adequate rationale underpinnings, within the reference to-be-modified itself or some other source, to make the proffered modification. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006); *see also KSR*, 550 U.S. at 418 (quoting Federal Circuit *Kahn* statement with approval).

To that end, Petitioner cites paragraphs 226–229 of Dr. Sands’ Declaration. Pet. 51–52. Specifically, Dr. Sands’ opines that “[a] tapered tab would allow the consumer to more easily push the tab into the slit. The tapered tab-slit feature has been an industry standard closure feature for folding cartons and other consumer paperboard packaging for decades and was commonly seen for consumer use on cereal box, cracker, chewing gum folding cartons that demand closing features,” and then cites Brown as support for these assertions. Ex. 1003 ¶¶ 227–229. We see no reason why

these statements can be characterized as anything other than “some articulated reasoning with adequate rationale underpinnings.”

Patent Owner then asserts that “the Petitioner fails to explain why substituting the tab of *Brown* [ ] would ‘facilitate easy insertion of the tab into the slit’ any more than the rectangular design of *Kato*.” PO Resp. 40. Petitioner responds that “according to Dr. Sand, ‘trapezoidal tab is ideal since it guides the tab into the slit when a consumer in the process of closing two end flaps may not have aligned the tab and slit exactly.’” Pet. Reply 12 (Ex. 1022 ¶ 39). We are persuaded that Petitioner’s reasoning and factual underpinnings are logical, accurate, and adequate.

Patent Owner asserts further that Petitioner does not account adequately for the interplay between the E-shaped slit of *Kato*, the rectangular-shaped tab of *Kato*, and the trapezoidal tab of *Brown*. PO Resp. 40-41 (citing Ex. 2007 ¶¶ 46, 60). We are unpersuaded because the test for obviousness is not bodily incorporation, but what “the combined teachings of those references would have suggested to those of ordinary skill in the art.” *In re Keller*, 642 F.2d at 425. To that end, we note that neither claims 5 and 25, nor the independent claims from which they respectively depend, recite an E-shaped slit.

### 3. *Dependent Claim 30*

In addition to “the tab is substantially trapezoidal in shape,” which was addressed above with respect to dependent claim 5, dependent claim 30 recites also “wherein the slit in the first end panel is substantially T-shaped.” Petitioner cites slit-state score 34 of *Kato* as corresponding to the aforementioned claim limitation. Patent Owner’s assertions, and our

analysis, are the same as set forth above for the same limitations recited in dependent claims 4 and 24, and, thus, need not be repeated here.

4. *Secondary Considerations*

Analogous to the reasoning set forth above with respect to secondary considerations and independent claims 20 and 29, even after weighing this ground of unpatentability with the evidence of secondary considerations, we conclude that Petitioner has shown sufficiently that dependent claims 5, 25, and 30 would have been obvious over a combination of Kato, Clough, and Brown.

4. *Conclusion*

After considering Petitioner's and Patent Owner's positions, as well as supporting evidence, including evidence of secondary considerations, we determine that, by a preponderance of the evidence, Petitioner has met its burden for showing that claims 5, 25 and 30 of the '078 Patent are unpatentable over the combination of Kato, Clough, and Brown. In addition to findings we make above in connection with our analysis of claims 5, 25 and 30 as obvious in view Kato, Clough, and Brown, we also adopt as our findings, unless indicated otherwise, Petitioner's positions as to how Kato, Clough, and Brown discloses each of the limitations of claims 5, 25 and 30. We further adopt as our own Petitioner's rationales for modifying Kato in view of Clough and Brown, as referenced above.

F. *Claims 34, 35, 37–42, 44–49, and 51–53 as  
Unpatentable Over Kato and Young*

Petitioner contends that claims 34, 35, 37–42, 44–49, and 51–53 are unpatentable over a combination of Kato and Young. Pet. 29–52, 56–58 (citing Exs. 1003, 1005, 1006, 1011, 1020). Patent Owner disagrees.

PO Resp. 41–47 (citing Exs. 1003, 1006, 2001, 2007, 2031). Claims 34, 39, 42, and 47 are independent. Petitioner replies. Pet. Reply 3–11 (citing Exs. 1002, 1022, 2007, 2022, 2031, 2033).

1. *Young (Ex. 1006)*

Young relates to microwave active susceptors suitable for use in packaging and preparation of microwave food products. Ex. 1006 ¶ 2. Figure 10J of Young is set forth below.

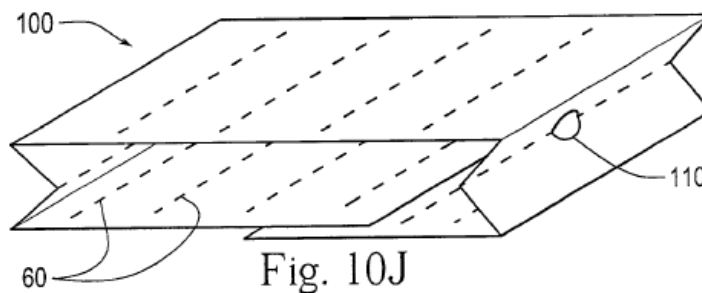


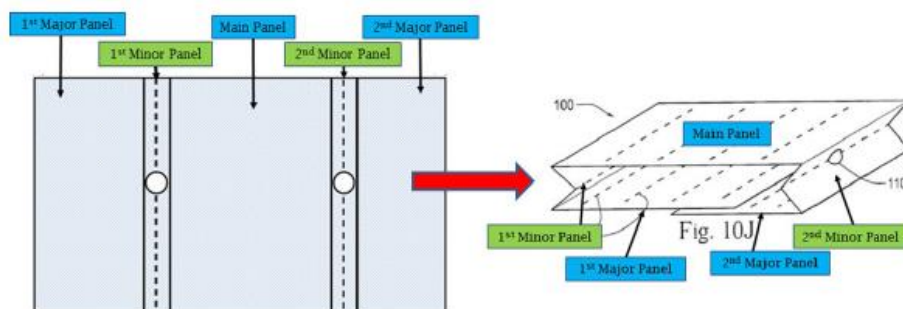
Figure 10J shows a package element formed from a susceptor material.

2. *Petitioner's Positions*

Petitioner asserts that the combination of Kato and Young teach or suggest each and every limitation of claims 34, 35, 37–42, 44–49, and 51–53. Using independent claim 34 as an example, Petitioner essentially performs the same mapping of panels from Kato as was performed for independent claim 1, replaces Clough with Young for the microwave energy interactive material, and further cites Young for disclosing that it was known to split the second main panel of Kato into a first major panel and a second major panel. For the rationale for splitting the main panel of Kato in view of Young, Petitioner asserts the following:

Regardless, and to the extent that *Kato* does not alone disclose a blank having two major panels that connect together

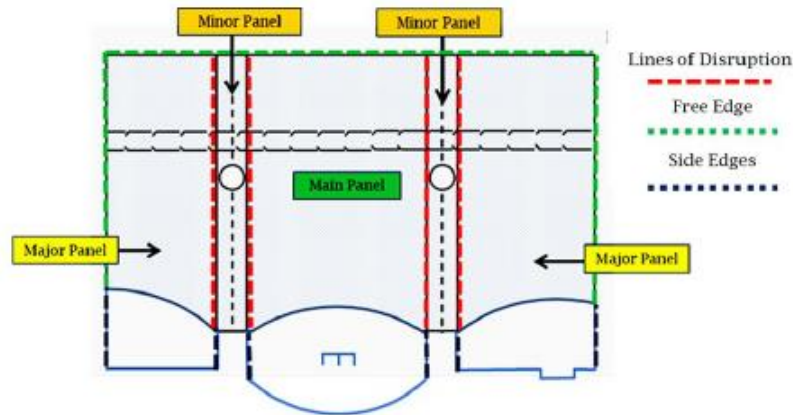
to form the main panel, modifying the Kato blank to have such a configuration would have been obvious to a POSA in view of *Young*. *Young* discloses the well-known usage in the art of combining partial panels to form a main panel. Ex. 1006, Fig. 10J, ¶ 0097. Below is a marked-up Figure 10J from *Young* showing the pair of major panels connected together to form the floor of the susceptor sleeve. Ex. 1006, Fig. 10J. The sleeve configuration of Figure 10J is nearly identical to that of Figure 4B of the '078 Patent. Ex. 1006, Fig. 10J. A layperson and particularly a POSA would easily see that the blank used to form the 3D sleeve in Figure 10J of *Young* would be the following (Ex. 1003, Sand Decl., ¶ 166):



Petitioner's annotated illustration of a blank used  
to form the 3D sleeve in Figure 10J of *Young*

Pet. 33–34.

Hence, to the extent that *Kato* does not alone disclose a first major panel and a second major panel configured to form a main panel, such express disclosure is taught by *Young*. Ex. 1006. Moreover, *Young* teaches that the sleeve can include a lid and be a folding carton that a POSA would understand is readily adapted to have a common closing feature such as a tab-slit on the base of the carton. Ex. 1006 at ¶ 0057, claim 27; Ex. 1003, Sand Decl., ¶¶ 164-165. A POSA would have found it obvious to combine the teachings of *Kato* and *Young* to form a blank as shown in Illustration 3 below, which is basically identical to the blank in Figure 4A of the '078 Patent (Ex. 1003, Sand Decl., ¶¶ 166-169).



Petitioner's annotated illustration of a combined  
blank in view of Kato and Young.

Pet. 35. Petitioner sets forth similar analyses for claims 35, 37–42, 44–49, and 51–53. Pet. 44–52, 56–58.

3. *Rationale to Modify Kato in view of Young to Meet the Limitations of Claims 34, 35, 37–42, 44–49, and 51–53*

Patent Owner asserts that Dr. Floros makes clear that modifying “the blank of Kato in view of Young to render certain claims of the ‘078 Patent obvious” would require seven (7) separate modifications, and that “[t]his level of modification – completely redesigning, reconstructing, and changing the purpose of Kato’s container or blank – cannot reasonably said to be ‘obvious.’” PO Resp. 44–47. As an initial matter, we are unpersuaded that modifying the “purpose” of Kato has any relevance for the same reasons as set forth above. In essence, any “process, machine, manufacture, or composition of matter”<sup>12</sup> can have many purposes, but so long as those purposes, and their attendant advantages and disadvantages, were known to one of ordinary skill, we are unpersuaded that they affect appreciably an

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<sup>12</sup> 35 U.S.C. § 101.

obviousness analysis that is otherwise supported by “some articulated reasoning with some rational underpinning.” *KSR*, 550 U.S. at 418.

Furthermore, we are unclear as to why Petitioner was required to provide a rationale to “deconstruct the package [of Kato] to form a blank.” Indeed, we find that Figure 3 of Kato, cited explicitly by Petitioner, expressly discloses a blank. Pet. 30 (citing Ex. 1005).

Moreover, reliance on a large number of references (and, accordingly, a large number of modifications) in a ground of unpatentability does not, without more, weigh against the obviousness of the claimed invention. *In re Gorman*, 933 F.2d 982, 986 (Fed. Cir. 1991) (affirming a rejection of a detailed claim to a candy sucker shaped like a thumb on a stick based on **thirteen** prior art references). Instead, as noted above, the proper analysis is as to whether there is adequate articulated reasoning with adequate rational underpinning to support each modification. To that end, we address below Patent Owner’s alleged deficiencies with Petitioner’s proffered modifications. Furthermore, we note that unlike *In re Gorman*, the instant ground of unpatentability includes only two references, not seven or thirteen.

Patent Owner asserts that Young only vaguely mentions “adding end flaps” at paragraph 79. As an initial matter, we are unclear as to how something can be vaguely disclosed. Instead, Young expressly and unequivocally discloses “the sleeve has open ends or flaps to partially close the ends,” and Patent Owner has not explained sufficiently why one of ordinary skill would have considered that disclosure to be anything other than “end flaps.” And in any case, Patent Owner’s assertions are inapposite, as Kato, not Young, is cited for disclosing end flaps, so no “modification” is necessary. Pet. 40–41 (citing Ex. 1005).



Patent Owner asserts next that there is insufficient support for the modification to Kato of “cut the end flaps to form partial end flaps as recited in the ’078 Patent; and then, in view of ‘modified Young.’” As an initial matter, we note that Patent Owner does not provide any further analysis concerning this assertion, but, in any case, we disagree. Petitioner discusses extensively the rationale for modifying Kato to include partial panels to form a main panel. Pet. 31–36 (citing Ex. 1003, 1005, 1006). While we acknowledge that most of Petitioner’s discussion here is to the main panel, and not an “end flap,” Petitioner does expressly disclose partial end flaps in “Illustration 3” (Pet. 35), and so we are persuaded that Petitioner has articulated adequately an intent to have the rationale concerning partial main panels to also be applied to end flaps. To that end, we also determine that Petitioner has shown sufficiently that modifying Kato to include partial end flaps would have been known to and within the abilities of one of ordinary skill. Our analysis here is also applicable to Patent Owner’s similarly conclusory assertion concerning insufficient support for the modification to Kato of “reconfigure the panels of Kato to form first and second major panels and first and second partial end flaps.”

Patent Owner asserts additionally that there is insufficient support for the modification to Kato of “change the shape of each panel of the Kato blank to provide perpendicular edge configurations.” Patent Owner, however, does not provide any further analysis. We disagree with Patent Owner for the same reasons as set forth above with respect to our analysis of the “substantially equal side edges of end panels” required by independent claims 20 and 29, and we need not repeat that analysis here.

Patent Owner asserts further that there is insufficient support for the modification to Kato of “add apertures.”<sup>13</sup> Patent Owner, however, does not provide any further analysis as to why Petitioner’s analysis on pages 50–51 of the Petition, which has express citations to underlying Exhibits 1003 and 1006, is deficient. We are persuaded that Petitioner provides adequate articulated reasoning with adequate rational underpinnings for the proffered modification.

Patent Owner asserts additionally that there is no rationale to modify Kato to include a microwave energy interactive material, as taught by Young, for essentially the same reasons set forth above for the same modification of Kato in view of Clough. Patent Owner’s assertions are unpersuasive for the same reasons as set forth above for the modification of Kato in view of Clough, and need not be repeated here.

Patent Owner asserts also that “Young is focused entirely on an absorbing layer that would be necessary to prevent alteration of the package or soggianness of the food caused by any liquids in the food (Ex. 1006 ¶ [0027]) and thus fails to provide any motivation to make such modifications. Ex. 2007 ¶¶ 47–48.” PO Resp. 47. Patent Owner’s assertions are misplaced, as we are unclear of the relevance of absorbing layers to any of the proffered modifications of Kato in view of Young.

4. *Independent Claims 34, 39, 42, and 47 –  
Substantially Perpendicular Panels*

Independent claims 34, 39, 42, and 47 each recite a blank including panels “having a first dimension extending in a first direction and second

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<sup>13</sup> Of the claims addressed in this ground of unpatentability, only dependent claims 38, 41, 46, and 53 expressly recite “aperture.”

dimension extending in a second direction substantially perpendicular to first direction.”

Patent Owner asserts that Kato does not teach the limitation because “[t]he figures of *Kato* make clear, however, that the first and second dimension taught in *Kato* are not perpendicular. Ex. 2001, FIG. 3.” PO Resp. 42. In particular, Patent Owner asserts that the container of Kato “flares out” to allow easier inserting and access to the food item, and that such “flare outs” indicate the presence of dimensions that are not perpendicular. PO Resp. 41–42 (citing Ex. 2007 ¶ 61). As an initial matter, we note that the aforementioned claims recite “*substantially* perpendicular.” Patent Owner has not addressed why Kato’s “flared out” configuration could not be considered “*substantially* perpendicular.”

Moreover, Patent Owner’s assertions are flawed, as even if we were to agree that Kato does not disclose the aforementioned claim limitations, Patent Owner does not present any arguments against Petitioner’s obviousness assertions. See PO Resp. 41–43. To that end, we have considered, and are persuaded by, Petitioner’s assertion that

[t]o the extent that *Kato* does not illustrate panels extending in exactly perpendicular first and second directions, *Kato* nonetheless expressly discloses forming a “box-shaped container body 1” wherein “[t]he side peripheral wall 2 of the container body 1 is formed to be a rectangular cylinder in planar view.” Ex. 1005, ¶¶ 0011–0012, Figs. 1– 5. *Kato* further discloses that “dimensions of the container body 1 are designed by matching a croquette, which has common size as the bulky food F, and needless to say, the design can be changed according to the types and size of the bulky food F.” Ex. 1005 at ¶ 0014; See also *Id.* at ¶ 0007, ¶ 0011.

Pet. 30; *see also* Pet. Reply 16–17. After considering Petitioner’s and Patent Owner’s positions, as well as their supporting evidence, we are persuaded that Petitioner has shown sufficiently that the aforementioned limitations of independent claims 34, 39, 42, and 47 are at least suggested by Kato.

5. *Independent Claims 39, 42, and 47 – Free Edge*

Independent claims 39, 42, and 47 each recite “the free edge of the first partial end panel is at least partially straight and extends substantially in the second direction.” Patent Owner asserts “Petitioner again improperly relies upon an end panel of *Kato* – not a *partial* end panel – in support of its analysis. Paper 4, pp. 40-42.” PO Resp. 43. Patent Owner asserts further that Young does not remedy this deficiency of Kato, because Young does not disclose end panels. PO Resp. 43–44 (citing Ex. 2007 ¶ 67). Our analysis is the same as set forth above with respect to Patent Owner’s assertion that there is insufficient support for the modification to Kato of “cut the end flaps to form partial end flaps as recited in the ’078 Patent; and then, in view of ‘modified Young,’” and need not be repeated here.

6. *Dependent Claim 49 – “T-shaped slit”*

Dependent claim 49 recites “substantially T-shaped slit.” Patent Owner asserts that Kato does not meet this claim limitation, and that Young does not remedy this deficiency. PO Resp. 44. Our analysis is the same as set forth above with respect to dependent claims 4 and 24, and need not be repeated here.

7. *Secondary Considerations*

Patent Owner has not identified, and we are unable to ascertain independently, any limitations of claims 35, 37–42, 44–49, and 51–53 that are remotely comparable to the “removable portion” recited in dependent

claim 6. Indeed, Patent Owner has not identified, and we are unable to ascertain independently, any limitations of claims 35, 37–42, 44–49, and 51–53 that are comparable to even the broader “opening” limitation recited in independent claim 1. As set forth above, both Patent Owner and Petitioner effectively agree that in order to be considered to have a nexus with certain claims of the ’078 patent, the evidence of secondary consideration must largely encompass three essential features: (1) a selectively closable end made of the end panels, (2) microwave interactive materials in the portable sleeve, and (3) the incorporation of an opening feature into the sleeve. By failing to show that any of claims 35, 37–42, 44–49, and 51–53 include the third feature, however, Patent Owner has not met their burden of showing sufficiently that there is a nexus between the evidence of secondary considerations and claims 35, 37–42, 44–49, and 51–53.

Even if we were to determine, however, that, despite the absence of the third feature, there is a discounted nexus between claims 35, 37–42, 44–49, and 51–53 and the evidence of secondary considerations, we are unpersuaded that such evidence would outweigh our determination that Petitioner’s proffered combination of Kato and Young accounts adequately for every limitation of claims 35, 37–42, 44–49, and 51–53. Put simply, given that we determined above that the evidence of secondary considerations did not outweigh Petitioner’s assertions and evidence against a claim with a clear nexus to all three essential features, we are unpersuaded that claims 35, 37–42, 44–48, and 51–53, each of which have a much more tenuous nexus due to the absence of the third feature, outweighs Petitioner’s proffered combination of Kato and Young with respect to claims 35, 37–42, 44–48, and 51–53. While we acknowledge that Petitioner’s proffered

combination of Kato and Young involves more modifications than Kato and Clough, given the reduced nexus, our ultimate determination of obviousness is unchanged.

Accordingly, for these reasons, we determine that claims 35, 37–42, 44–48, and 51–53 are obvious in view of Kato and Young, as discussed above.

#### 8. *Conclusion*

After considering Petitioner’s and Patent Owner’s positions, as well as their supporting evidence, we determine that, by a preponderance of the evidence, Petitioner has shown that claims 34, 35, 37–42, 44–49, and 51–53 are unpatentable under 35 U.S.C. § 103(a) as obvious over Kato and Young. In addition to findings we make above in connection with our analysis of claims 34, 35, 37–42, 44–49, and 51–53 as obvious in view Kato and Young, we also adopt as our findings, unless indicated otherwise, Petitioner’s positions as to how Kato and Young discloses each of the limitations of claims 34, 35, 37–42, 44–49, and 51–53. We further adopt as our own Petitioner’s rationales for modifying Kato in view of Young, as referenced above.

#### *G. Dependent Claims 36, 43, and 50 as Unpatentable over Kato, Young, and Brown*

Dependent claims 36, 43, and 50 each recite a tab, projection, or locking feature that is “substantially trapezoidal in shape.” Petitioner contends that these claims are unpatentable over a combination of Kato, Young, and Brown. Pet. 51–52 (citing Exs. 1003, 1005, 1009). Patent Owner disagrees. PO Resp. 47–48 (citing Exs. 1003, 1009, 2007). Petitioner replies. Pet. Reply 11–12 (citing Exs. 1003, 1009, 1022, 2007).

Patent Owner makes the same assertions as set forth above for dependent claims 5 and 25. Patent Owner assertions are equally unpersuasive for the same reasons discussed above, and need not be repeated here.

After considering Petitioner's and Patent Owner's positions, as well as their supporting evidence, we determine that, by a preponderance of the evidence, Petitioner has shown that claims 36, 43, and 50 are unpatentable under 35 U.S.C. § 103(a) as obvious over Kato, Young, and Brown. In addition to findings we make above in connection with our analysis of claims 36, 43, and 50 as obvious in view Kato, Young, and Brown, we also adopt as our findings, unless indicated otherwise, Petitioner's positions as to how Kato, Young and Brown discloses each of the limitations of claims 36, 43, and 50. We further adopt as our own Petitioner's rationales for modifying Kato in view of Young and Brown, as referenced above.

*H. Claims 34, 35, 37–42, 44–49, and 51–53 as  
Unpatentable over Kato and Winkelman*

Petitioner contends that claims 34, 35, 37–42, 44–49, and 51–53 are unpatentable over a combination of Kato and Winkelman. Pet. 29–33, 36–52, 56–58 (citing Exs. 1003, 1005, 1007). Patent Owner disagrees. PO Resp.44–60 (citing Exs. 1003, 1007, 2048).

*1. Winkelman (Ex. 1007)*

Winkelman relates to containers suitable for heating food items in a microwave oven, particularly food items that require surface browning and crisping, and containers that allow the food to be baked and/or reheated in the microwave for convenient consumption. Ex. 1007 ¶ 1. Figure 6 of Winkelman is set forth below.

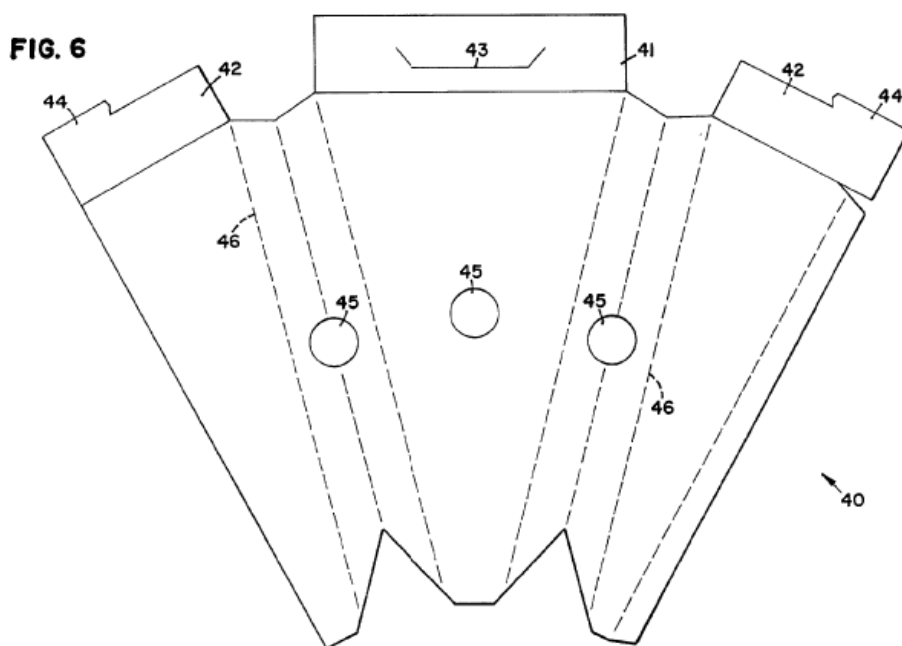


Figure 6 is a top plan view of a flat, unfolded container.

## 2. *Petitioner's Positions*

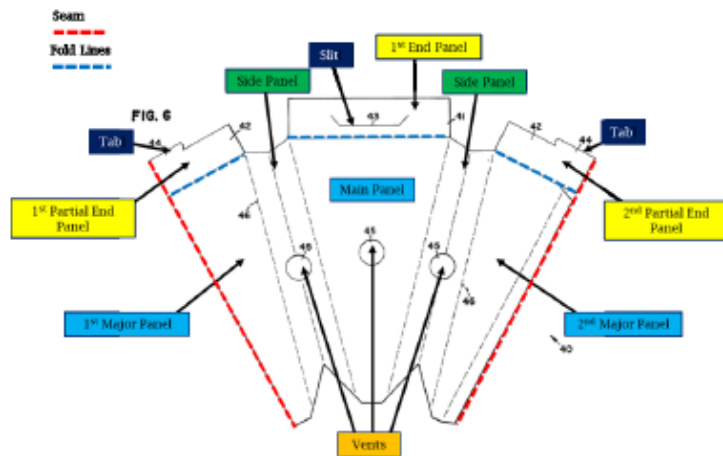
Petitioner asserts that the combination of Kato and Winkelman teach or suggest each and every limitation of claims 34, 35, 37–42, 44–49, and 51–53. Using independent claim 34 as an example, Petitioner essentially performs the same mapping of panels from Kato as was performed for independent claim 1, replaces Clough with Winkelman for the microwave energy interactive material, and further cites Winkelman for disclosing that it was known to split the second main panel of Kato into a first major panel and a second major panel. For the rationale for splitting the main panel of Kato in view of Winkelman, Petitioner asserts the following:

To the extent that Kato and Young do not disclose a blank having a first major panel and a second major panel configured to form a main panel, such express disclosure is taught by Winkelman. Ex. 1007, Fig. 6; Ex. 1003, Sand Decl., ¶¶ 170-171.



Winkelman expressly shows a blank having a first major panel (94b) and a second major panel (94a) to form a floor for a susceptor sleeve. Ex. 1007, ¶ 0040, 0043, Figs. 1, 6, 7, 8; Ex. 1003, Sand Decl., ¶¶ 170-171. While the blank and sleeve are shown in a triangular configuration, Winkelman contemplates that “[t]he envelope can be a rectangular-shaped envelope that can enclose a rectangular food product.” Ex. 1007, ¶ 0034. A POSA who wanted to use Kato to heat food in a microwave would be motivated to look at using the pair of major panels of Winkelman to form the floor of the susceptor sleeve to increase the heating of the food item. Ex. 1003, Sand Decl., ¶¶ 170-171. Below is a marked-up Figure 6 from Winkelman identifying the first and second major panels along with other similar claimed features in the ’078 Patent:

Pet. 36.



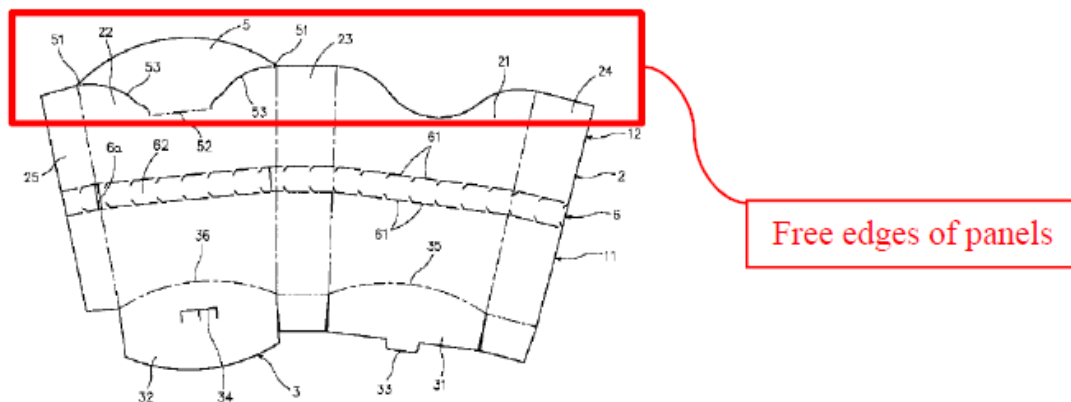
Petitioner’s annotated illustration of Figure 6 of Winkleman,  
which is a top plan view of a flat unfolded container.

Pet. 37. Petitioner sets forth similar analyses for claims 35, 37–42, 44–49,  
and 51–53. Pet. 44–52, 56–58.

2. *Independent Claims 34, 39, 42, and 47 –  
Free Edge of Blank in Second Direction*

Independent claims 34, 39, 42, and 47 recite “the free edge of each the  
main panel, first minor panel, second minor panel, first major panel, and

second major panel collectively define a free edge of the blank extending in the second direction.” Patent Owner asserts Kato’s Figure 3 does not disclose the recited “free edge of the blank *extending in the second direction*,” because Kato instead teaches a free edge of the blank *extends in multiple directions*. PO Resp. 49–50. Patent Owner provides an annotated drawing of Kato’s Figure 3 to illustrate its assertion, as shown below:



Patent Owner annotated drawing of Kato’s Figure 3, which is a material expansion plan of a personal meal container. PO Resp. 50 (citing Ex. 2001, Fig. 3; Ex. 2007 ¶ 65). Patent Owner asserts also that Winkelman does not remedy the aforementioned deficiency of Kato, because Winkelman’s Figure 6 also shows a free edge with angled edges extending in multiple directions, and in any case, that Petitioner did not rely on Winkelman in this manner. PO Resp. 51–52. Petitioner replied. Pet. Reply 17–18. We agree with Patent Owner, and their expert Dr. Floros, that neither Kato nor Winkelman expressly disclose the aforementioned claim limitation.

Nevertheless, Patent Owner’s assertion is inapposite because Petitioner also presents an obviousness position with respect to the

aforementioned claim limitation. More specifically, the Petitioner asserts the following concerning the aforementioned claim limitation:

Claim 34 further requires “a free edge” of the panels to define a free edge of the blank extending in the second direction. Ex. 1001, 26:47-53. Kato, Sigel and Young all disclose where the panels each have a free edge extending in a second direction, i.e., laterally, that collectively define a free edge of the blank extending in the second direction. Ex. 1005, Fig. 3; Ex. 1010, Fig. 7; Ex. 1006, Fig. 10J; Ex. 1003, Sand Decl., ¶¶ 187–188; *See also* Illustration 3 on page 35 of the Petition.

Pet. 39–40. Here, the Petition refers to paragraph 188 of Dr. Sands’ Declaration, which reads as follows:

Using a free edge of a blank extending in the second direction is well-known and obvious to a POSA to form an opening having a straight end. Kato also discloses a free edge extending in the second direction to form the opening though the opening is not exactly a straight opening. Ex. 1005, Fig. 3. ***It would have been obvious to a POSA to modify Kato to have a free edge extending solely in a second direction to form an opening with a straight end which would be easier and cheaper to design and manufacture.***

Ex. 1003 ¶ 188 (emphasis added). Patent Owner does not address this modification. We have considered Petitioner’s assertions, and are persuaded that they are adequately articulated and supported by sufficient rational underpinnings.<sup>14</sup>

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<sup>14</sup> We note that other portions of the Petition and cited evidence appear to support Petitioner’s assertion that modifying a free edge to extend solely in a second direction would have been obvious. *See* Pet. 30, 36-37 (citing Ex. 1005 ¶¶ 7, 11–12, 14, 34, Figs. 1–5); Ex. 1022 ¶ 66 (citing Ex. 2007 ¶ 51).

3. *Independent Claims 34, 39, 42, and 47 –  
Substantially Perpendicular Panels*

Independent claims 34, 39, 42, and 47 each recite a blank including panels “having a first dimension extending in a first direction and second dimension extending in a second direction substantially perpendicular to first direction.” Patent Owner asserts this limitation is not taught for essentially the same reasons discussed above regarding the same limitation and the combination of Kato and Young. PO Resp. 52–53 (citing PO Resp. 41–43). Our analysis is the same as that set forth above for the ground of unpatentability based on Kato and Young, and need not be repeated here.

4. *Independent Claims 42 and 47 –  
Substantially Equal Side Edges of End Panels*

Independent claims 42 and 47 each recite that “the side edges of the end panel, the side edges of the first partial end panel, and the side edges of the second partial end panel have a substantially equal second dimension.” Patent Owner asserts this limitation is not taught for essentially the same reasons discussed above regarding the same limitation recited in independent claims 20 and 29, and the combination of Kato and Clough. PO Resp. 53–54 (citing PO Resp. 32–34). Our analysis is the same as that set forth above for the ground of unpatentability based on Kato and Clough, and need not be repeated here.

5. *Rationale to Modify Kato in view of Winkelman to Meet the  
Limitations of Claims 34, 35, 37–42, 44–49, and 51–53*

Patent Owner asserts that Petitioner has not provided a sufficient rationale to modify Kato to include microwave energy interactive materials for heating, as taught by Winkelman, for essentially the same reasons as set forth above with respect to the proposed modification of Kato in view of

Clough. PO Resp. 54–55 (citing PO Resp. 35–39). Our analysis is the same as that set forth above for the ground of unpatentability based on Kato and Clough, and need not be repeated here.

6. *Secondary Considerations*

The parties assertions concerning, our analysis of, the evidence of secondary considerations is the same as that set forth above for the ground of unpatentability based on Kato and Young, and need not be repeated here.

7. *Conclusion*

After considering Petitioner’s and Patent Owner’s positions, as well as their supporting evidence, we determine that, by a preponderance of the evidence, Petitioner has shown that claims 34, 35, 37–42, 44–49, and 51–53 are unpatentable under 35 U.S.C. § 103(a) as obvious over Kato and Winkelman. In addition to findings we make above in connection with our analysis of claims 34, 35, 37–42, 44–49, and 51–53 as obvious in view Kato and Winkelman, we also adopt as our findings, unless indicated otherwise, Petitioner’s positions as to how Kato and Winkelman discloses each of the limitations of claims 34, 35, 37–42, 44–49, and 51–53. We further adopt as our own Petitioner’s rationales for modifying Kato in view of Winkelman, as referenced above.

*I. Independent Claims 1, 12, 20, 29, 34, 39, 42, and 47 as Unpatentable over Sigel and Kato*

Petitioner contends that Independent claims 1, 12, 20, 29, 34, 39, 42, and 47 are unpatentable over a combination over Sigel and Kato. Pet. 9–49 (citing Exs. 1001, 1003, 1005, 1010, 1018). Patent Owner disagrees. PO Resp. 55–60 (citing Exs. 1010, 2007, 2031). Petitioner replies. Pet. Reply. 2, 7–9 (citing Exs. 1003, 1010, 1022).

1. *Sigel (Ex. 1010)*

Sigel relates to a food container that can accommodate a desire to be able to heat food items in a microwave without having to remove the food item from its individual packaging container. Ex. 1010 ¶¶ 2, 5. Figure 7 of Sigel is set forth below.

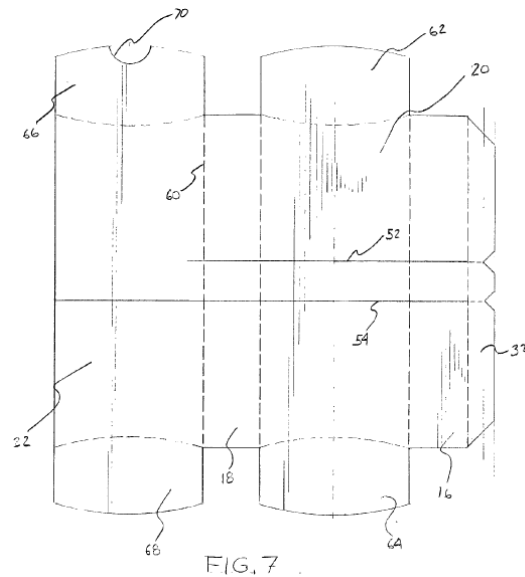


Figure 7 is a plan view of a handheld sandwich package. Sigel discloses packaging structure 10 including sides 16, 18, 20, 22, and end flaps 62, 64, 66, 68. Ex. 1010 ¶¶ 20, 26. Packaging structure 10 may be heated in a microwave. Ex. 1010 ¶ 29.

3. *“Microwave Energy Interactive Material”*

Independent claims 1, 12, 20, 29, 34, 39, 42, and 47 each recite “microwave energy interactive material.” Petitioner acknowledges that neither Kato nor Sigel expressly discloses “microwave energy interactive materials,” and instead asserts that one of ordinary skill would have modified Sigel to include microwave energy interactive material for facilitating browning and crisping. For evidentiary support concerning this

ground of unpatentability, Petitioner solely relies on the testimony of Dr. Sands. Pet. 13–16 (citing Ex 1003 ¶¶ 20–29, 106–114, 126–128). More specifically, Petitioner asserts the following:

Similar to *Kato*, *Sigel* does not expressly disclose the usage of microwave interactive material on at least one of the panels. However, *Sigel* discusses using a microwave to heat the food product and the requirement that the paperboard material be “capable of withstanding exposure to microwave radiation, heat, steam, and hot water during microwave cooking of the food product.” Ex. 1010, ¶¶ 0005, 0025, 0029. *Sigel*, similar to *Kato*, would have been known by a POSA to be useful for heating a food product in a microwave and a *POSA would have known the benefits of including microwave interactive material on at least one panel of the sleeve for facilitating browning and crisping of the food product within as discussed above with respect to Kato*. Ex. 1003, Sand Decl., ¶¶ 126–128. It would have been common knowledge and therefore obvious to a POSA to add microwave interactive material to the interior surface of *Sigel*. *Id.* at ¶ 126–129.

Pet. 16 (emphasis added). Of the various paragraphs of Dr. Sands’ Declaration cited for evidentiary support by Petitioner, we determine that the following is most pertinent:

The exemplified food product in *Sigel* is a “wrap sandwich” which may or may not be desirable to brown and crisp the exterior surface. Ex. 1010, ¶¶ 0002, 0004, 0020, 0033. However, *Sigel* specifically discloses that “[i]t is not necessary that the food item be a wrap sandwich or even have a shape similar to the wrap sandwich . . . it is contemplated that other food items can be used with the present invention.” Ex. 1010, ¶ 0033. *A POSA would contemplate using Sigel to heat a food product in a microwave where it was desirable to brown and crisp the food product, e.g., a croquette as disclosed in Kato*. Hence, a POSA would find it obvious in view of general knowledge to add microwave interactive material to the interior surface of the package in *Sigel*.

Ex 1003 ¶ 127 (emphasis added). Dr. Sands’ testimony further reads: “Sigel expressly discloses the usage of the packaging in a microwave which would have led a POSA to modify Sigel to use microwave interactive material.”

Ex 1003 ¶ 128.

Patent Owner asserts that Dr. Sands’ testimony is deficient, because Dr. Sands does not provide a proper evidentiary basis for “microwave energy interactive material.” We agree. The only evidentiary basis for the aforementioned claim limitation, for this ground of unpatentability, identified by Dr. Sands’ as being expressly disclosed in either Sigel or Kato, is the disclosure of microwaving a food item in Sigel (Ex. 1010 ¶¶ 5–7, 25, 29), and a croquette disposed in the container body of Kato. Ex. 1005 ¶¶ 4, 14. From just that general desire to microwave a food item and a separate disclosure of a croquette, Dr. Sands extrapolates that one of ordinary skill would want to brown and crisp the croquette in the microwave, and from that extrapolation, Dr. Sands concludes that one of ordinary skill would have modified Sigel to include “microwave energy interactive material” to effect that browning and crisping. We agree with Patent Owner that such a chain of extrapolations from the mere disclosures of microwaving a food item and a separate disclosure of a croquette is impermissible hindsight, and, thus, not credible. In particular, we agree with Patent Owner that Petitioner has not explained adequately how such disclosures would have indicated to one of ordinary skill in the art the addition of “microwave energy interactive material” to the packaging of Sigel.

### 3. *Conclusion*

After considering Petitioner’s and Patent Owner’s positions, as well as their supporting evidence, we determine that Petitioner has not met its



burden of showing, by a preponderance of the evidence, that claims 1, 12, 20, 29, 34, 39, 42, and 47 are unpatentable under 35 U.S.C. § 103(a) as obvious over Kato and Sigel.

*J. Petitioner's Motion to Exclude*

Petitioner urges the Board to exclude certain portions of Mr. Voyzey's Declaration (Ex. 2008 ¶¶ 14-24, 27-30, 31-33) and Dr. Floros Declaration (Ex. 2007 ¶ 72) and certain accompanying Exhibits references in those Declarations (Exs. 2015-2018, 2021-2024, 2026-2028) under Fed. R. Evid. 602, 701, 801, 802, and 901. Mot. 2-15. Patent Owner disagrees. Mot. Opp. 2-15. Petitioner replies. Mot. Reply 1-5.

At oral argument, Petitioner indicated that they were not challenging any of the aforementioned Exhibits based on authentication (Tr. 77:17-80), and upon considering Petitioner's assertions, they appear to go more to weight. To that end, we expressly note that the panel has taken into account Petitioner's assertions in determining the weight to be accorded each of the aforementioned Exhibits. Furthermore, the aforementioned testimony and Exhibits are almost exclusively directed to Patent Owner's assertions concerning secondary considerations. To that end, we note that even when all of the challenged testimony and evidence is considered, for the reasons set forth above, we determine that Petitioner prevails on the grounds for which the evidence of secondary considerations are relevant. Accordingly, on these facts, Petitioner's Motion to Exclude is *denied*.

### III. CONCLUSION

Petitioner has demonstrated, by a preponderance of the evidence, that claims 1–53 of the '078 Patent are unpatentable. Petitioner's Motion to Exclude is *denied*.

This Final Written Decision discusses or cites information that is the subject of motions to seal. Accordingly, we have entered this Decision in the Board's E2E system as "Board and Parties Only." If either Party believes that any portion of this Decision should be maintained under seal, the Party must file, within fifteen (15) business days from the entry of the Decision, a motion to seal portions of the Decision. The motion must include a proposed redacted version of the Decision, accompanied by an explanation as to why good cause exists to maintain under seal ***each redacted portion***. In the absence of a motion to seal by the specified deadline, the full version of this Decision will become public. Any opposition to a motion must be filed within ten (10) business days from the date of entry of the motion to seal; no reply to an opposition is authorized. For the sealed Exhibits, the Parties should follow the guidance related to 37 C.F.R. § 42.56. *See* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,761 (Aug. 14, 2012).

### IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–53 of the '078 Patent are held unpatentable;

FURTHER ORDERED that Petitioner's Motion to Exclude is *denied*;

and

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FURTHER ORDERED that because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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